The Botanic Garden;

Consisting of

Highly finished Representations

OF HARDY

ORNAMENTAL FLOWERING

PLANTS,

CULTIVATED IN GREAT BRITAIN;

WITH

Their Classification, History, Culture,

AND

OTHER INTERESTING INFORMATION.

BY

B. MAUND, F.L.S.

Vol. 1.

LONDON:

SIMPKIN AND MARSHALL, STATIONERS HALL COURT;

AND

SHERWOOD AND Co. PATERNOSTER ROW.

Smith pinx.t et Watts flor. sculp.t

Fennew scripsit.

THE

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THEIR NAMES, CLASSES, ORDERS, HISTORY, QUALITIES, CULTURE, AND PHYSIOLOGICAL OBSERVATIONS.

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B. MAUND, F. L. S.

VOL. X.

"Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read and read,
And read again, and still find something new,
Something to please and something to instruct."
HURDIS.

London;
SIMPKIN, MARSHAL, AND CO., STATIONERS' HALL COURT:
SHERWOOD AND CO., PATERNOSTER ROW.

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SISYRIN'CHIUM GRAMINIFO'LIUM.

DWARF SISYRINCHIUM.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of Chile,	Height 6 inches.	Flowers in October.	Duration. Perennial.	Introduced in 1825.

No. 865.

The literal meaning of the name of this genus, Sisyrinchium, is pig's snout; but for what reason the Greeks employed the term is difficult to determine. The species now figured must not be confused with a plant published some years ago, as Sisyrinchium gramineum, which is in reality Sisyrinchium anceps, and has blue flowers.

This genus comprises several pretty plants, particularly Bermudianum, striatum, and anceps. The latter little plant is as hardy as any British weed, and seedlings of it will spring up in abundance when once introduced to the borders. Sisyrinchium striatum, published under No. 66, is exceedingly pretty; and, although old plants will sometimes be destroyed in the borders, seedlings will spring up unexpectedly. When once introduced it will seldom be wholly lost.

Sisyrinchium graminifolium is somewhat more tender, and should have protection in winter. It has fleshy fastigiate roots, and if these are taken up in the autumn, and potted in sandy compost, they may be wintered in any convenient nook, where they are secure from frost.

PENTSTE'MON COBŒ'A.

COBŒA-FLOWERED PENTSTEMON.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of Texas.	Height $2\frac{1}{2}$ feet.	Flowers in Autumn.	Duration. Perennial.	Introduced in 1835.

No. 866.

It will be recollected that the genus Pentstemon (PENTE, STEMON, fifth stamen) was formed out of Chelone. Their only constant distinction is in the seeds; those of Pentstemon being angular, whilst Chelone's seeds have a membranous margin. Chelone, too, has woolly anthers; those of Pentstemon are generally glabrous, but this is not a certain distinctive character. Our plant is named Cobœa, from its inflated corolla having some resemblance to that of Cobœa scandens.

This species of Pentstemon varies much in the colour of its flowers, being sometimes nearly white, and its markings indistinct. It is, like Murrayana, a rare plant, being of rather delicate habit, and requiring ample protection from frost.

It will flower finely in the borders, but it should not be turned out till the beginning of May. Care should be taken to fertilize the flowers, so as to encourage the production of seeds; and young plants should also be struck from cuttings. In the autumn, the old plants should be taken up and potted in a sandy compost; and, during winter, be thoroughly protected in a cold frame.

SPIRÆ'A VENUS'TA.

BEAUTIFUL SPIRÆA.

Class. ICOSANDRIA. *Order.* DI-PENTAGYNIA.

Natural Order. ROSACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Uncertain.	3½ feet.	July.	Perennial.	in 1840?

No. 867.

The flexible or rope-like stems of Spiræa furnished the idea for giving it a name, from SPEIRA, cord. Or, as some contend, the Greek SPIRA, a pillar, is the foundation of the name, from the upright growth of the original plant. Venusta, elegant or beautiful, is quite applicable to the plant.

Some of the most attractive species of Spiræa are of late introduction; others, however, there are that have long been known to British gardens, particularly the Spiræa salicifolia, usually known as Spiræa frutex, under which name it passed with many of the older botanists; Gerard and Parkinson, however, call it Spiræa Theophrasti, on the authority of Clusius, who referred it to a plant so named by the celebrated Greek philosopher, Theophrastus. Thus it will be seen that the family of plants under consideration may claim the honour of a name of no mean antiquity. Theophrastus lived three hundred years before the birth of our Saviour, the contemporary of Plato, Aristotle, and Ptolemy; the successor of Aristotle in the school of the Peripatetics; no mean tutor, it may be readily allowed, seeing that he had at once two thousand

pupils under his charge; and his field of instruction a wide one. Unlike modern colleges, which leave their pupils unable to distinguish one kingdom of nature from another, the Athenian comprehended the study of all nature — its great Original — and the operations of mind. Well may Pope join the ancients, and say

> "Thus then to Man the voice of Nature spake —
> Go, from the creatures thy instructions take :
> Learn from the birds what food the thickets yield ;
> Learn from the beasts the physic of the field :
> Thy arts of building from the bee receive ;
> Learn of the mole to plough, the worm to weave ;
> Learn of the little nautilus to sail,
> Spread the thin oar, and catch the driving gale.
> Here too all forms of social union find,
> And hence let reason, late, instruct mankind :
> Here subterranean works and cities see ;
> There towns aërial on the waving tree.
> Learn each small people's genius, policies,
> The ant's republic, and the realm of bees ;
> How those in common all their wealth bestow ;
> And anarchy without confusion know ;
> And these, for ever, though a monarch reign,
> Their separate cells and properties maintain."

The Spiræa venusta is a remarkably pretty plant for the parterre, and as it grows from three to four feet high, assumes a lofty elegance in the garden, that could scarcely escape the notice of even an English philosopher. The name we have used, is that by which it is known, but it is not quite certain that it will constitute a distinct species. It demands no particular soil or management.

ECHI'NOPS RUTHEN'ICUS.

RUSSIAN GLOBE THISTLE.

Class. SYNGENESIA. *Order.* SEGREGATA.

Natural Order. COMPOSITÆ.

Native of Russia.	Height 2 feet.	Flowers in July & Sep	Duration. Perennial.	Introduced in 1816.

No. 868.

The name, Echinops, is deduced from the Greek ECHINOS, a hedgehog; and OPSIS, resemblance. The likeness of the round prickly heads of the plant, to the animal, is evident enough to the sense, either of seeing or feeling, particularly the latter, when some of the species are meddled with.

The Echinops Ruthenicus, when well established amongst other plants, produces a rather pleasing variety, from its strong contrast with the usual subjects of the garden. Its foliage, too — green above, and white beneath, although somewhat thistly, produces a pleasing effect. It is of low stature, and should occupy a place near the front of the border; being unlike some of the species from the more southerly districts of Europe, which grow six feet high. It may be planted in any common earth, and its roots will admit of division, but not frequently.

The Echinops is a compound flower; that is, it has numerous little florets, on a common receptacle, and enclosed within a calyx which belongs equally to the whole. Under No. 792, the Echinacea dubia, we transcribed, for the instruction of our

younger readers, Rossieu's very pleasing description of a compound flower, by the dissection of the common Daisy. It may not be unuseful here, to show what may be taken for, but is not, a compound flower; and it shall be given in the same amusing author's words.

Speaking of the common Clover, he says, "If you should take one in hand, seeing so many little flowers assembled, you might be tempted to take the whole for a compound flower. You would, however, be mistaken, In what? say you. Why, in supposing that an assemblage of many little flowers is sufficient to constitute a compound flower; whereas, besides this, one or two parts of the fructification must be common to them all; so that every one must have a part in it, and no one have its own separately: these two parts in common are the calyx and receptacle. The flower of the Clover, indeed, or rather the group of flowers, which has the appearance of being but one flower, seems at first to be placed upon a sort of calyx; but remove this pretended calyx a little, and you will perceive that it does not belong to the flower, but that it is fastened below it to the pedicle that bears it. This then is a calyx only in appearance; but in reality it belongs to the foliage, not to the flower: and this supposed compound flower is only an assemblage of very small leguminous or papilionaceous flowers, each of which has its distinct calyx, and they have nothing common to them but their being fastened to the same pedicle. Vulgarly, all this is taken for one flower; it is a false idea, however; it is a head of flowers."

Rosa Hardii . 2/3

Aconitum ovatum . 1/3

Dianthus caryophyllus . 1/2

Impatiens tricornis . 1/2

RO'SA HAR'DII.

HARDY'S ROSE.

Class.
ICOSANDRIA.

Order.
POLYGYNIA.

Natural Order.
ROSACEÆ.

Hybrid Origin.	Height 3 feet.	Flowers in June & July	Habit. Shrub.	Introduced in 1836.

No. 869.

The derivation of the word Rosa has been lately noticed. It will be remembered that it was founded on the prevailing colour of the flower; in the present instance, however, our specimen falsifies its own name. Monsieur Hardy, whose name is appended to our present novel Rose, is the curator of the Luxemburg garden, where it was raised from seed.

The gardens of Luxemburg are under the authority of the French government; and these, having been so particularly devoted to the cultivation of Roses, have assisted much in giving an impetus to the propagation of seedling varieties, for which France has of late years been so eminent.

The first mention which we have of the Rosa Hardii, which we have now the pleasure of figuring, was in 1836, by a correspondent of the Gardeners' Magazine, who tells us he brought it to England, from Luxemburg. There it was originated as a hybrid, between that Persian curiosity—the Rosa berberifolia, and a variety of the bracteata, or Macartney Rose.

Of the Persian parent of the curious production

before us, our readers should have information. It is a curiosity, inasmuch as the flowers resemble the offspring; but its leaves, unlike those of every other known Rose, are quite simple, like the common Barberry. Plants of it were raised at Kew, in 1790, but they soon died, others again were raised in the Horticultural Society's garden, in 1829, most of which also died. Every variety of treatment was in vain tried with them. They spurned all; as if in grief for the absence of an eastern sun, they all pined and died away, excepting two; which, we are informed, still continue without increase. Plants may be sometimes met with at nurseries, but chiefly seedlings. It will be recollected that a few seasons ago, it was exhibited at the London Horticultural Rooms, having been grafted on Fraser's Noisette Rose. We are also told that it has succeeded perfectly on the continent, when worked on stocks of the Dog Rose.

For the opportunity of figuring this interesting little Rose we are indebted to Mr. Cameron, of the Birmingham Garden, where it flowered, last summer (1842), in much beauty, against the front of the greenhouse. It is there on its own stock, has not produced seed, is deciduous, and evidently rather tender.

This Rose, grown on its own roots, proves to be rather difficult of management. Budded on the Dog Rose, Mr. Rivers says, it flourishes in any soil or situation. It should have a south wall, and well-drained rich soil; and if in summer the points of the shoots become milldewed, they should be syringed, and sprinkled with flour of sulphur.

ACONI'TUM OVA'TUM.

OVAL-LEAVED ACONITE.

Class.
POLYANDRIA.

Order.
TRIGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Cashmere.	$2\frac{1}{2}$ feet.	August.	Perennial.	in 1839.

No. 870.

Named, by the ancients, after a town of Asia.

Old botanists tell us of instances of death occurring from the inadvertent use of Aconite roots; and the ancient Greek writers speak of it as a most virulent poison; even smelling the flower is said to have produced serious illness. It is not clearly shown what plant was alluded to, by the ancients, under this name; sufficient has, however, transpired within our own memory, to convince us of the poisonous qualities of the Aconitum napellus.

The novel species of Aconitum which we now figure, was introduced into this country by the Honourable Court of Directors of the East India Company, from Cashmere. It is, perhaps, the most curious of the whole genus, but certainly not the handsomest. As well as curious in its flowers, its foliage is remarkable, being neither palmately nor pinnately divided, but entire. In which respect, like the Rosa berberifolia, it differs from all others of its own extensive genus.

The plant appears to be perfectly hardy, it grows freely in any common earth. It may be divided at the root, or propagated by seeds.

DIAN'THUS CARYOPHYL'LUS.

Var. Brabbin's Squire Meynel.

CARNATION.

Class. DECANDRIA. *Order.* DIGYNIA.

Natural Order. CARYOPHYLLACEÆ.

Native of England.	Height 2½ feet.	Flowers in August.	Duration. Perennial.	Cultivated in 1597.

No. 871.

The Carnation has been a favourite flower in all ages, and its name, Dianthus (from DIOS, ANTHOS), Jove's Flower, clearly implies superiority.

The present variety, which we publish from the collection of the Messrs. Pope, of Handsworth, possesses those qualities which are esteemed as requisite to constitute a first-rate flower. We do not figure it as one that excels every other of the family; their unbounded numbers prevent this.

It is gratifying to know that England is preeminent in its culture of the Carnation. In no other country are prizes offered, to the extent they are amongst us, to excite the emulation of cultivators, in raising new varieties, that shall come up to the acknowledged standard of perfection.

Our continental neighbours pay little regard to any fixed laws of beauty, whereby to judge the Carnation; which, although they may be conventional, are indispensable, when flowers are to be compared and judgment passed on their varied characters. The French, for instance, seek for novelties and monstrosities, rather than for flowers approaching an acknowledged standard of merit.

Indeed, it must be admitted, that amongst ourselves, the laws are, in some particulars, rather vague. Judges seem occasionally to be thrown off their guard, by the size or the brilliancy of a flower; whereas, form should always be the first quality. And as regularity, with due variety, always indicates design, so will it assist in producing beauty and exciting pleasure.

By thousands of sensible persons, the notions of florists, regarding the beauty of their productions, is ridiculed We allude to the notions which are entertained by those who cultivate a particular class of plants for competition. It must, however, be recollected, that the sense of beauty is instinctive, and that taste is progressive. In the garden, a child will be delighted with every flower; the most brilliant will prove the most attractive, but he knows not why. When a few years older, he will begin to discriminate, and the clearness and the harmony of colours will be more truly appreciated. His taste is progressively improving. Further advanced in life, his estimate of the beautiful must, amongst flowers, as amongst other works of nature or art, depend on the progressive training of the mind. It is not enough to pronounce one flower as more beautiful than another, without being able to give a reason for the opinion. If it were, novelty would stand the best chance for the prize. Although novelty be no quality of the thing to which it is attributed, it greatly sways the judgment, when this is not founded on any definite principles.

Ere long, we hope to enter on the practical part of the florist's province.

IMPA'TIENS TRICOR'NIS.

THREE-HORNED BALSAM.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
BALSAMINACEÆ.

Native of E. Indies.	Height 2 feet.	Flowers in Autumn.	Duration. Perennial.	Introduced in 1839.

No. 872.

For the meaning of the name, Impatiens, see No. 829.

Under the number we have just mentioned, is described one of these newly-introduced plants, of which other fine varieties may be expected. Regarding the present species, Dr. Lindley says it appears to be nearest to Impatiens campanulata, from which it differs in inflorescence, in the flowers being yellow, not cream-coloured; and in the dorsal sepal having a spur in the middle of its back. It derives its name of three-horned from the spur, the horn just mentioned, and the apex of the back sepal, together forming three conical processes.

This constitutes a desirable annual, since it will grow in any common garden soil, and there ripen seeds. It does not, however, appear to be quite as hardy as Impatiens glanduligera, which we have previously published. Of many self-sown seedlings, which vegetated in February of 1842, only three or four survived the severity of the subsequent weather. Its seeds should be sown in the latter part of March, or beginning of April. The plants should have abundance of moisture in the summer.

Rehmannia Chinensis. 1/2

Lathyrus Macrei. 3/4

Tagetes corymbosa. 2/3

Phlox speciosissima. 1/2

Mills. del. 219 Witts. sculp.

REHMAN'NIA CHINEN'SIS.

CHINESE REHMANNIA.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of China.	Height. 2½ feet.	Flowers in August.	Duration. Perennial.	Introduced in 1835.

No. 873.

With the derivation of the name, Rehmannia, we are unacquainted. It was adopted by Liboschutz, a Russian botanist, probably after the name of some one of his countrymen.

This plant was received by the London Horticultural Society, from the Imperial Garden of St. Petersburg; and the anticipated pleasure of seeing it flower was greatly excited by the report received from the continent of its splendour. Expectation, however, was somewhat disappointed, and we have now an opportunity of explaining the cause. The plant from which our drawing was made was grown by the Messrs. Pope, of Handsworth Nursery, who state, that in a pot, in the greenhouse, it grew weak and puny, but in the open border it had become a strong and vigorous plant, flowering most abundantly, and the roots running about, and throwing up shoots in a weed-like manner. It had stood out during the winter of 1841-2, and in the succeeding summer, flourished as we have described. At the present time, February, 1843, it continues green and healthy. It will be observed that this is a production of China, not imported since the

attainment of our late victories in that country of vegetable riches, but still it is an encouraging memorandum in support of our expectation of splendid accessions from the "Celestial Empire." As stated above, Russia was our carrier in the conveyance of this plant.

We feel much obliged by Mr. Alexander Pope's communication of these facts, and we are sure that those who feel an interest in the cultivation of a flower garden will duly appreciate his efforts in submitting newly-introduced exotics to experiment, to determine their true habits; as well as the generous promptitude with which his experience is always communicated to the public.

The propagation of the Rehmannia Chinensis is easy. Its spreading fleshy roots throw up shoots which may be taken off at any season, and will require but common attention. Their roots too, may, like some of the Campanulas and Verbascums, be taken up and cut into short lengths; and if planted with their tops just above the surface of the soil, either in pots or the borders, according to the season, they will soon form good plants. If potted, the soil used should be loam and sand, with the addition of a little peat.

Notwithstanding the success attending the full exposure of this ornamental plant to our winter, we confess that we should be too careful, as a cultivator, to submit our whole stock of it to the mercies of an English winter. It would be more prudent, in autumn, to pot a plant or two, and give them such protection, during the severe months, as may happen to be convenient.

LATH'YRUS MACRÆ'I.

MAC RAE'S LATHYRUS.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Chili.	Height 3 feet.	Flowers in October.	Duration. Perennial.	Introduced in 1824.

No. 874.

Lathyrus is an antient Greek name, applied by the Greeks to a leguminous plant, but the exact species is doubtful. The natural order, Leguminosæ, to which the Lathyrus belongs, is the most important in cultivation. The term is said to have been deduced from lego, to gather, on account of its fruit being gathered—not mown, or collected with the stalks.

Nearly the whole of the plants, belonging to this order, have, what are called papilionaceous flowers, that is, butterfly-shaped, from papilio, the systematic name of the insect, and by this character they may be recognised at sight. Their foliage too, possesses peculiarity of character, being more or less irritable through the whole order, insomuch that some botanists have considered it as claiming a place next to the animal kingdom.

The Lathyrus Macræi forms a neat plant, when supported against a wall or trellis, but is unsuitable for mingling with others, in the flower borders. When well established it increases freely by runners from the roots, and these may be divided in spring.

TAGE'TES CORYMBO'SA.

CORYMBOSE TAGETES.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of Mexico.	Height 2 feet.	Flowers in September.	Duration. Annual.	Introduced in 1825.

No. 875.

Tagetes, from the name of a heathen deity.

The showy annual, now figured, has much of the appearance, when a few flowers only are seen, of the common French Marygold; but when seen growing in the garden, and in luxuriance, it shows itself to be a completely different subject. Unlike the French Marygold, it does not spread from the bottom into a dense straggling bush, but grows in single upright stems, branching only towards the top, where it spreads into handsome corymbs of flowers, to which we cannot do artistical justice.

Its seeds were first introduced by the late Dr. Sutton, Archbishop of Canterbury; who, with his Lady, Mrs. Manners Sutton, were instrumental to the introduction of many American plants, not previously known Religion, and the admiration of garden beauties, are so perfectly in unison with each other, that those who cannot relish the one are unlikely to be much enamoured of the other. There are persons who esteem an earnest attention to the service of their maker too effeminate for their observance. There are others, whose rude minds understand not the perceptions of more cultivated

intellect; these, Shenstone must surely have had in remembrance when he wrote the following lines; a sentence of which we formerly quoted.

"Why brand these pleasures with the name
Of soft unsocial toils, of indolence and shame?
Search but the garden, or the wood;
Let yon admired Carnation own,
Not all was meant for raiment or for food,
Not all for needful use alone:
There, while the seeds of future blossoms dwell,
'Tis colour'd for the sight, perfumed to please the smell.
Why knows the Nightingale to sing?
Why flows the Vine's nectareous juice?
Why shines with paint the Linnet's wing?
For sustenance alone? for use?
For preservation? Every sphere
Shall bid fair pleasure's rightful claim appear.
And sure there seem of human kind
Some born to shun the solemn strife;
Some for amusive tasks design'd
To soothe the certain ills of life;
Grace its lone vales with many a budding rose,
New founts of bliss disclose,
Call forth refreshing shades, and decorate repose."

This plant requires a long summer to bring it to maturity, therefore ought to be sown in February, or early in March, in a hotbed or greenhouse. Here the plants should be potted singly, and receive protection till May, and then be turned into a warm dry situation in the open garden. If cuttings of it be struck early in the autumn, they may be kept in a warm greenhouse, where they will produce gaiety throughout the winter.

PHLOX SPECIOSIS'SIMA.

SHOWY PHLOX.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
POLEMONIACEÆ.

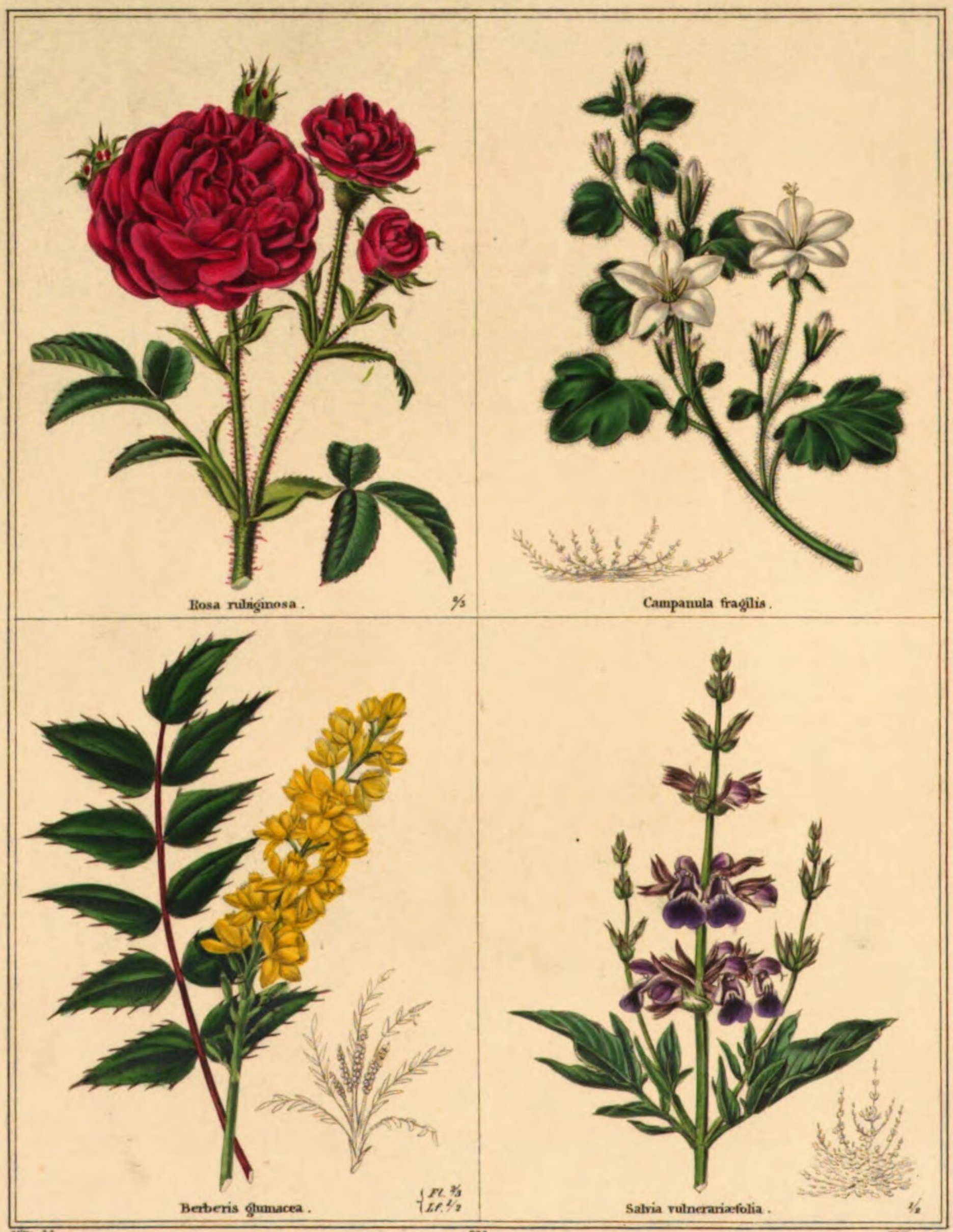
Hybrid Origin.	Height 3 feet.	Flowers in September.	Duration. Perennial.	Introduced in 1840.

No. 876.

The derivation of the name has been recently noticed.

This is one amongst the handsomest, if not the very handsomest plant belonging even to this handsome and very showy genus. It is, probably, a hybrid variety from Pyramidalis and one of the larger species, but whether it originated in this country or the continent, we are not informed. We received it from the Handsworth Nursery. The pale centre of the corolla, contrasting with the bright margin, gives it a finer effect than is produced by any other Phlox.

Notwithstanding the taller species of Phlox are always handsome under any sort of management, still no plants yield a more grateful acknowledgement for attentions bestowed on them in cultivation. Their longer, brighter, and more numerous flowers, amply compensate kindly treatment. When left undivided, every one must have observed their efforts to enjoy fresh soil; the centre of a large root will even decay. They should be annually divided into small portions, a circumstance to which we shall ere long revert.



Mitts. del. 220 Vietor. sculp.

RO'SA RUBIGINO'SA.

Variety; The Duchess.

SCARLET BRIAR.

Class. ICOSANDRIA. *Order.* POLYGYNIA.

Natural Order. ROSACEÆ.

Hybrid Origin.	Height 3 feet.	Flowers in June & July.	Habit. Shrub.	Raised in 1820?

No. 877.

Rosa, signifying red, is explained under No. 177.

Rosa rubiginosa, in its natural form, as the wild Eglantine, with pale single flowers, is indigenous to every part of Europe; but cultivation has stepped in and produced rich-coloured double varieties, from the simple child of nature, which we find it in our hedges. This, however, has not been effected without some degree of sacrifice. Nature is just in the distribution of her favours, even amongst the children of the wild Eglantine, and will not be coerced. On the Rose that we have figured she has bestowed beauty, superior to that of the Eglantine; but has withheld all the fragrance of the parent—the praise of the poets: the leaf of the gay flowered descendant is scentless as its thorn.

The term, Eglantine, which every body uses, is sometimes misapplied, and this cannot be matter of surprise, when we find one of our first poets—even Milton, lead the way in error. In his Allegro, allusion is made to the Woodbine, under the title of Eglantine,

> "Through the Sweet-briar, or the Vine,
> Or the twisted Eglantine."

This single error has led many into doubt, although other poets — even Chaucer himself, has used the term correctly; and Gerard, in his remarks on this wild Rose, distinctly says, "In English we call it Eglantine or Sweet-briar." Perhaps we shall be told, that to as great a name, even amongst botanists, error, in this particular, has attached itself. Error is everywhere — perfection nowhere. Linneus himself attached this poetical name to the wrong species of Rose; but he subsequently corrected his mistake.

The descendant of the Eglantine, which we have figured, is known, not only as the Scarlet Briar, but also as La Belle Distinguée, or Lee's Duchess, or La Petite Duchesse. The late Mr. Lee, of the Hammersmith nursery, first introduced it, some years ago, from Holland, and gave it the name of Duchess, which, as the florist's name, should be retained. It is an exceedingly pretty Rose for general culture, especially if worked on standards. It is small-sized, but compact, and bright coloured.

A small section of Roses, under the title Rubiginosæ, has been established, of such species and varieties as agree with the Sweet-briar. About half a dozen distinct species have been recognised by botanists, as belonging to it; whilst, of hybrid garden varieties, three times this number are acknowledged as belonging to Rubiginosa alone.

These are the prominent points connected with the present section; and as we intend, ere long, taking up another desirable variety of Sweet-briar, we shall then put our readers in possession of further particulars concerning them.

CAMPAN'ULA FRA'GILIS.

Variety; hirsuta.

BRITTLE BELL-FLOWER.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. CAMPANULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Italy.	6 inches.	August.	Perennial.	in 1833.

No. 878.

From the Latin Campana, a bell, the present genus appropriately received its name. Campanula fragilis has sometimes been called diffusa; brittle, or diffuse, is sufficiently applicable; priority of use, however, always determines the preference.

Native, as this pretty Campanula is, of the mild southern parts of Italy; growing, even there, on dry limestone rocks, we can scarcely feel surprise that it should require a little attention and petting in our region of comparative austerity. It is often seen about Naples; and growing in close tufts, covered by its azure flowers, it is deservedly an object of admiration. It was introduced to Mrs. Marryat's celebrated garden at Wimbledon, by Mrs. Palliser, who received it from the continent, through the favour of Professor Tenore. It has several times excited attention at the exhibitions of the London Horticultural Society; and, in one instance, had a silver Banksian medal awarded it.

It will require frame protection in the winter, except in very favourable and sheltered situations, where, upon dry rock-work, it may bear full exposure. It should be potted in well-drained small

pots, in a mixture of loam, peat, and sand; and, in summer, it succeeds best by being placed out with the alpine plants.

A somewhat curious enquiry was instituted, in Germany, a few years ago, regarding the relative properties of differently coloured plants; of those odorous and inodorous; agreeable and disagreeable; distinguishing these latter qualities as they exist amongst plants of different colours. Upwards of four thousand species were examined, and their colours and qualities registered. The Campanulas appeared to be amongst those which were most deficient of white flowers, and those wanting fragrance. Little more than four in a hundred were white; and about one in a hundred only possess smell. This instance, however, was found to be at variance with the general rule, as deduced from all the plants examined. Amongst the total number, white flowers were most abundant; next to these, yellow; and then red; the difference not being great between them. Of all other colours and intermediate shades, the numbers proved to be much less. White flowers were not only the most numerous, but they also proved proportionably the most fragrant. Amongst coloured flowers, the red had the greatest, and the blue the least, tendency to the formation of odoriferous substances. On the average, there appeared to be only one odoriferous species in ten. Again, it appeared that amongst the white flowers which were odorous, not more than one in fifteen were disagreeable; but, of orange and brown flowers, by far the greatest portion proved to be offensive.

BER'BERIS GLUMA'CEA.

GLUMACEOUS BARBERRY.

Class.
HEXANDRIA.

Order.
DIGYNIA.

Natural Order.
BERBERACEÆ.

Native of	Height	Flowers in	Habit.	Introduced
N. America	3 feet.	Mar. & Apr.	Shrub.	in 1826.

No. 879.

Our present generic appellation is supposed to have been derived from the Arabic; see No. 653. Its specific name has reference to the glume-like scales of the raceme. This species has been called nervosa, after Pursh; but, as an inadvertency occurred in this author's specific description, it was thought best to adopt a new name and character together.

Seeds of the Berberis glumacea were sent home by Douglas, the London Horticultural Society's collector, who gathered them in pine forests, on the north-west coast of America, where it grew abundantly. It is evergreen, and rarely exceeds three feet in height; and is clothed to the ground with its ornamental pinnate leaves — handsome at all times, but the most attractive when they assume their dark purple hue of autumn. When well established, it sends out abundance of suckers, three or four feet from the parent plant; which, if left undisturbed, would soon extend over a considerable space of ground. It succeeds in any soil; and, although made purple by autumn's blast, it defies all further injury.

SAL'VIA VULNERARIÆFO'LIA.

VULNERARIA-LEAVED SAGE.

Class. DIANDRIA. *Order.* MONOGYNIA.

Natural Order. LABIATÆ.

Native of	Height	Flowers in	Duration.	Introduced
Armenia.	1 foot.	July & Aug.	Perennial.	in 1820.

No. 880.

This genus received its name on account of its healing properties, from the Latin salvere. The specific name, vulnerariæfolia, may require explanation, inasmuch as now we have no genus called vulneraria. The plant with which the foliage of our Salvia is compared, is the Anthyllis vulneraria, a well-known British plant, with pinnate leaves, resembling those of the Salvia now figured.

This species has not, as we are aware of, been figured in any botanical work, nor indeed is it often met with, even in the best gardens. With the plant from which our drawing was made, we were favoured by Mr. Cameron, with whom it is quite hardy. It is the more interesting on account of its being suffruticose, a character which distinguishes it from every other species of this intricate genus.

This Salvia grows the most freely in a light well-drained soil, or on rock-work; and may be increased by division of its roots. Being suffruticose, its young shoots must not be cut down in autumn, a precaution very likely to be neglected, and which would prevent its efficient flowering in the subsequent season.

Fuchsia Chandlerii. 9/10

Pentstemon latifolium. 9/10

Aster amellus. 5/12

Tritoma Burchellii. 9/10

Mills del. 221 Waite sculp.

FU'CHSIA CHANDLE'RII.

CHANDLER'S FUCHSIA.

Class. OCTANDRIA. *Order.* MONOGYNIA.

Natural Order. ONAGRACEÆ.

Hybrid Origin.	Height 1 foot.	Flowers in July & Aug.	Habit. Shrub.	Raised in 1840.

No. 881.

Fuchsia, it will be recollected, is derived from the name of an old German botanist. It is not, however, the name of the learned German alone which, at the present day, graces the genus, but also the names of a multitude of zealous propagators of novelties.

Seedling Fuchsias are raised with nearly the same facility as annuals; and of such different character are some of the new species, of late introduction, that a wide range occurs in the genus, within which distinct varieties may be propagated by hybridization. To such extent has this been carried, that it is impossible to determine to what parents a particular plant may owe its origin. The mingled forms of Fuchsias, existing between fulgens and the older species, are still increasing; and, although it may seem to interfere with the established species presented to us by nature, it would be too cynical to desire, for a moment, to cast an impediment in the way of this exercise of ingenuity, and production of pleasures. The anticipation of raising a flower different from, or superior to, what has ever been seen; and this, too, enjoyed for a year or two

before its consummation, is surely worth something amongst the ills of humanity; especially when all the accumulation of evil, that attends disappointment, is but the occupant of a moment, and dies with the day that gave it existence.

Chandler's hybrid Fuchsia is a distinct and desirable variety, but probably requires a little more management than others; this, however, consists chiefly in destroying its flowers. It is so abundant a blossomer, that, unless this disposition be somewhat thwarted, it cannot produce young shoots sufficient to increase its size, and to give the appearance of luxuriance. Hence, if no young wood be made, it will be desirable to pick off all blossoms, till it begins to shoot freely, when it may be allowed to follow its natural inclination. Being of dwarf habit, an abundant bloomer, and its blossoms possessing great delicacy of tint, it is well suited for pot culture; therefore we introduce it more as a window than garden plant.

As Fuchsias are propagated in great abundance by nurserymen, and sold at very moderate prices, the admirer of this plant will, doubtless, purchase it, in preference to waiting for the chance of otherwise obtaining it. Indeed, it is but justice to afford encouragement to the nurseryman, who caters for the gratification of his friends as well as himself. Placed in a window, during summer, it will require but little care. Before winter arrives, we shall give further information on Fuchsias generally, and their management; and hope to give some account of the numerous species and varieties now in cultivation.

PENTSTE'MON LATIFO'LIUS.

BROAD-LEAVED PENTSTEMON.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
California	2 feet.	August.	Perennial.	in 1836.

No. 882.

For the derivation of Pentstemon, see No. 866.

Of all the genera which ornament the open department of the British Flower Garden, there is probably none which has received more ample extension than Pentstemon. A few of the species, it is true, will not bear exposure to severe winters; but their propagation, by cuttings, and some by division, is so very easy, that no difficulty would arise in keeping up a nearly perfect collection. The chief care required by them, when under winter protection, whether they are kept in a cold frame, or in a spare room in the dwelling-house, is that the pots of earth which contain the roots, be kept rather dry. An entire collection would be interesting.

The species, latifolius, has not, we believe, been hitherto published, although it was introduced into Great Britain in 1836. It is nearly allied to digitalis, but is a more free flowerer than that species.

This is a perfectly hardy plant, when grown in the open garden, in light soil, and a dry situation, It may be divided at the root, or raised from seeds, which it generally ripens.

AS'TER AMEL'LUS. Var. rubescens.

AMELLUS-LIKE STARWORT.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of	Height	Flowers in	Duration.	Introduced
Podolia.	3 feet.	Aug. & Oct.	Perennial.	in 1824.

No. 883.

ASTER, is itself literally a Greek word, signifying a star. Its application to this genus is sufficiently evident.

We published, under a previous number, the Aster amellus, and have always cultivated and regarded it with peculiar satisfaction, both for its own sake, and that of its classical associations. There now appear to be extant, seedling varieties of the species which vary considerably in their tint and habit. Some have redder flowers, as is the case with this, and are also of a more bushy growth, than the original, or that, at least, which we have regarded as the original plant. As it frequently perfects its seeds, attention to its further propagation may be desirable; for a variety, with flowers as bright as those of the red-flowering Novæ-angliæ, would be a most desirable accession to our Asters. Its low growth, compact habit, and abundance of flowers, are prominent recommendations.

The Aster amellus may be divided at the root for increase, either in the spring or autumn; indeed, without attention to division, increase will be slow. We are unable to advise on its culture from seeds,

TRI'TOMA BURCHEL'LII.

BURCHELL'S TRITOMA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
HEMEROCALLIDEÆ.

Native of	Height	Flowers in	Duration.	Introduced
C. G. Hope	$3\frac{1}{2}$ feet.	July & Aug.	Perennial.	in 1816.

No. 884.

The Greek TREIS, three; TEMNO, to cut, whence the present generic name is deduced, alludes to the three-edged leaves of this genus. The present species was sent from the Cape, by Mr. Burchell, whose name was therefore bestowed on it by the Hon. and Rev. W. Herbert, Dean of Manchester.

In an early part of this work, we published the Tritoma media, a plant having equal pretensions to admiration with that now figured; but possessing an unfortunate propensity. Plants, as well as men, sometimes have propensities that are unsuited to the views of those who look to them for gratification or utility. The Tritoma media always produces its flowers in winter, when they are sure to be prematurely destroyed. Burchellii, on the other hand, flowers at midsummer, and proves quite hardy; hence, is a splendid addition to the open parterre, when its beauty can be fully developed. Our plant was obtained from the Messrs. Pope, of Handsworth; and, as its character becomes known, it doubtless will be one in request.

It should be planted in light soil, in a dry situation, and may be increased by its offsets.

Berberis coriaria. 2/3

Campanula trachelium. 2/3

Rosa Bourboniana. 1/2

Iris tenax. 1/2

Mille del. 222 Walter sculp.

BER'BERIS CORIA'RIA.

TANNER'S BARBERRY.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
BERBERACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Nepal.	4 feet.	May & June	Perennial.	in 1835.

No. 885.

Berberis is a word generally believed to be of Arabic origin, signifying wild. Whether this plant is more distinguished for its tanning qualities than others of the genus, we are not informed; but from the specific name, which has been given to it by Dr. Royle, we may presume that it has. The bark of all the species of Berberis are known to be highly astringent, and in some instances purgative and tonic. The astringent principle, in the bark of our common Barberry, has caused it, long ago, to be employed in tanning, in the north of Europe; and also in dying leather and other articles a yellow colour.

This shrub is likely to grow to the size of our native species — the Berberis vulgaris, and is even more ornamental, both in flower and in fruit. Whether its berries will be made as useful, remains to be proved. It is very hardy, and grows freely in any common soil, requiring no particular treatment. It may be increased both by layers and seeds, and probably, when well established, will produce suckers which afford the most convenient mode of increase.

CAMPAN'ULA TRACHE'LIUM.

Var. pleno bicolor.

THROAT-WORT CAMPANULA.

Double two-coloured.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
CAMPANULACEÆ.

Hybrid Origin.	Height. 2 feet.	Flowers in July & Aug.	Duration. Perennial.	Cultivated in 1840.

No. 886.

The derivation of the name of this genus is given under No. 130. The specific name, Trachelium, or Throatwort, has been handed down to us from the old herbalists, who employed this Campanula in the cure of pain and swelling in the throat.

In allusion to the virtues of the Campanulas, or Bell-flowers, Gerard says the ancients have set down nothing; but of his own experience he states, "That they are excellent good against the inflammation of the throat, or uvula, and almonds, and all manner of cankers and ulcerations in the mouth, if the mouth and throat be gargarized and washed with the decoction of them."

The original variety of the Campanula trachelium has single blue flowers, and is a native of England, and most other parts of Europe. It has been very commonly cultivated in gardens, hence varieties of it have been produced with white flowers, double white, and double blue flowers; and lastly, with two-coloured double flowers, as seen in our present plate—a variety that is worthy of a place in every good collection of herbaceous plants. It requires no peculiar management.

There exists a curious phenomenon in all the Campanulas, and in most of the Campanulaceous order, which was first observed by Sprengel. The surface of the upper part of their style and of the stigmatic arms, is covered with long hairs, which are very visible in the bud, before the dispersion of the pollen; and which are regularly arranged in longitudinal lines in direct relation to the number and position of the anthers. At the period of dehiscence of the anthers, before the expansion of the corolla, and when the arms of the styles are still pressed against each other, in the form of a cylinder, these hairs cover themselves with a considerable quantity of pollen, which they brush, so to speak, out of the cells of the anthers; and, for this reason, they have been named, like the analogous hairs in Compositæ, Collectors. At the period when the flower expands, the arms of the style or stigmata separate, and curve backwards, and the anthers that surround them retire and shrivel up, after having lost all their pollen; but, at the same time, the pollen which was deposited on the outside of the style, detaches itself, and the hairs that covered the surface were supposed to fall off.

Dr. Lindley, who has stated these facts, in the Miscellaneous Notices of the Botanical Register, says that the hairs here spoken of, do not fall off, but they present a phenomenon of which no other example is known. They are retractile, like the tentacula of snails. They are mere lengthenings of the epidermis, and are ultimately received into subjacent cavities of the cellular tissue.

RO'SA BOURBONIA'NA.

QUEEN OF BOURBONS.

Class.
ICOSANDRIA.

Order.
POLYGYNIA.

Natural Order.
ROSACEÆ.

Hybrid Origin.	Height 8 feet.	Flowers in June, Sep.	Habit. Shrub.	Introduced in 1825?

No. 887.

The derivation of Rosa will, doubtless, be remembered.

The Rose now under notice, known as the Queen of Bourbons, is a hybridized plant, derived from the original Bourbon Rose, and of course recognized as belonging to the Bourbon section. We have called it Rosa Bourboniana; it should, however, be stated that it is not, botanically speaking, entitled to rank as a distinct species. Although it is impossible to trace the pedigree, of the original Bourbon Rose, it can only be received as a variety of canina. The present variety is an exceedingly desirable one, both for the beauty of its flowers, and its long-continued production of them; it is, indeed, rarely without flowers from June to November. Its shoots are short, and on standards they form a compact head. It is worthy of a place in every collection, notwithstanding it possesses very little fragrance. It should be budded or grafted on stocks of the wild Rose; or it may be grafted in spring, on the Boursalt, for dwarfs. It is an admirable plant for forcing.

Respecting the introduction to notice of the

original Bourbon Rose, we quote Mr. Rivers's account, as given in his Rose Amateur's Guide; who is a good authority on this subject. He says "A beautiful semi-double Rose, with brilliant rose-coloured flowers, prominent buds, and nearly evergreen foliage, made its appearance in this country, under the name of the L'Ile de Bourbon Rose, said to have been imported from the Mauritius to France, in 1822, by Mr. Noisette. It attracted attention by its peculiar habit, and more particularly by its abundant autumnal flowering. Still, such was the lukewarmness of English Rose amateurs, that no attempts were made to improve this pretty imperfect Rose, by raising seedlings from it, though it bore seed in large quantities. This pleasing task was left to our Rose-loving neighbours, the French, who have been very industrious, and, as a matter of course, have originated some very beautiful and striking varieties."

Its introduction to France is stated as follows. At the Isle of Bourbon, the inhabitants generally enclose their land with two rows of Roses, one of the common China, the other of the red Four-Seasons. Amongst these, sprung up the Rose in question, which attracted attention. Monsieur Breon, (now a seedsman in Paris) who arrived at Bourbon, in 1817, as botanical traveller for the government of France, propagated this Rose largely; and sent plants and seeds of it, in 1822, to Monsieur Jacques, gardener at the Château de Neuilly, near Paris, who distributed them among the Rose cultivators of France; who have proved industrious propagators of this pleasing section.

I'RIS TE'NAX.

TOUGH IRIS.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of California.	Height 6 inches.	Flowers in December.	Duration Perennial.	Introduced in 1826.

No. 888.

The derivation is explained under No. 3.

Iris tenax was discovered by Douglas, in California; in dry soils, or open parts of woods. He found it flowering in the spring; it has, however, in the Horticultural Gardens of London and Birmingham, flowered in November and December.

Douglas, as stated in the Botanical Register, page 1218, says "The native tribes about Aguilar river, in California, find this plant very serviceable for many purposes. From the veins of the leaves, fine cord is made, which is converted into fishing nets; and from its buoyancy, great strength, and durability, it suits this purpose admirably. It is also made into snares for deer and bears; and a good idea may be formed of its strength, when a snare, not thicker than a 16-thread line, is sufficient to strangle Cervus Alces, the great stag of California, one of the most powerful animals of its tribe. The cordage is also manufactured into bags and other articles."

A light dry soil is best suited to this plant. It increases slowly, but may be occasionally divided in the spring.

Fuchsia corymbiflora. 1/2

Kalmia hirsuta. 1/2

Centrocarpha grandiflora. 1/2

Impatiens longicornu. 1/2

Miss S. Maund del. 223 Watts, sculp.

FU'CHSIA CORYMBIFLO'RA.

CLUSTER-FLOWERED FUCHSIA.

Class. OCTANDRIA. *Order.* MONOGYNIA.

Natural Order. ONAGRACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
S.America	8 feet.	June & Aug	Perennial.	in 1839.

No. 889.

The name of this genus has been lately noticed.

Of all the Fuchsias hitherto introduced to our gardens, corymbiflora is the most splendid; still, we are told by botanists, who have wandered in the wilds of Peru, that even finer than this are yet to be obtained. Well may the Peruvians attach to it the name of Beauty-bush. It is not, however distinct species alone which are affording us so much gratification, but hybrids of all intermediate grades, between our oldest friends of the genus and our modern acquaintances—Fulgens and Corymbiflora. Every month seems to be giving birth to new forms; and doubtless will do so for many years, as we have seen to be the case with Calceolaria, and others.

Fuschia corymbiflora was first raised in this country by Mr. Standish, nurseryman, of Bagshot; seeds of it having been sent to him from America. It is a native of shady woods, towards Lima; and noticed by Ruiz and Pavon in their Flora Peruviana.

In our plate of this very splendid Fuschia we can but give a single corymb of its fine flowers; and, as indicated by the fractional figures annexed thereto, these are no more than half their natural

size. A full-length portrait would occupy a canvas, according to the language of the painter, of double kit-cat extent, or as large as a dining-room door. It has proved to be the most gigantic species at present known; and has rarely been hitherto seen in that perfection of size and magnificence which it is capable of attaining. Sometimes in the greenhouse it will grow six or eight feet high, without any indication of flowers, which may arise from its having extensive pot room, or rich feeding; still, where fine specimens are desired, this may not be objectionable. Under the requisite protection, there cannot be a doubt but it may be grown to double the height mentioned. On the other hand, if small flowering plants be required, cuttings should be struck, and the plants kept with little pot room. It is a species easily managed, and we esteem it of much value for the open garden. If cuttings be struck in the summer, and the small plants be kept in pots, in the house, till the May following, they may then take their places in the garden. Turned out of the pots, and trained against a wall, they become objects of great beauty in the latter part of the summer; but its remarkably fine foliage is likely to be injured if exposed in an unsheltered situation. It has not survived the winter with us; nor is this important, inasmuch as young plants are so easily struck and kept under protection through the winter. Probably the old roots also may be taken up in the autumn and kept in the house or a cold frame.

Young plants, struck from the points of shoots in a flowering state, flower early in small pots.

KAL'MIA HIRSU'TA.

HAIRY KALMIA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of	Height	Flowers in	Duration	Introduced
N.America	18 inches.	Aug. & Sep.	Perennial.	in 1790.

No. 890.

A more appropriate genus of plants could not have been chosen to perpetuate the name of Peter Kalm, inasmuch as their native habitat was the scene of his principal travels.

Kalmia hirsuta has long been admired by lovers of American shrubs, but rarely possessed. It is known that extraordinary love sometimes takes possession of the minds of parents in behalf of those children, who, from health, conduct, or misfortune, have occasioned the greatest amount of trouble and anxiety. So, from the attention required by the Kalmia hirsuta, some persons have been anxious to protect and preserve it; and, where this care has existed, the cultivator has, in general, experienced his reward, by witnessing the health and beauty of his nursling.

This plant should be potted in very sandy peat, well drained, and a few drainers mixed with the peat. During winter, it should be kept in a shady part of a cold frame; in summer, be put out with the alpines, under a northern wall. When cuttings can be obtained, they may be readily struck in sand, under a bell-glass.

CENTROCAR'PHA GRANDIFLO'RA.

GREAT-FLOWERED CENTROCARPHA.

Class.
SYNGENESIA.

Order.
FRUSTRANEA.

Natural Order.
COMPOSITÆ.

Native of America.	Height 3½ feet.	Flowers in September.	Duration. Perennial.	Introduced in 1830.

No. 891.

The Greek words KENTRON, KARPHE, signifying sharp pointed chaff, are combined to name the genus to which the present plant belongs. Allusion is hereby made to the chaffy scales which are found on the receptaculum of the flower.

This fine plant was discovered by the well known American botanist, Nuttall, who transmitted it to the late Mr. Barclay of Bury Hill, under the name of Rudbeckia nudicaulis — a different plant. The plants now belonging to Centrocarpha were formerly included in the genus Rudbeckia. This genus was divided by the late Professor Don, and Centrocarpha is made to comprise such species as have an elongated receptaculum, and entire leaves.

This is a remarkably showy autumnal flowering plant, which has become scarce, perhaps on account of its being destroyed in severe winters, when planted in moist situations; during summer, however, such situation is congenial to its luxuriant growth. Its roots may be divided in the spring, for increase; and, for its due protection against injury in winter, choose a light soil, and dry part of the garden.

IMPA'TIENS LONGICOR'NU.

LONG-HORNED TOUCH-ME-NOT.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. BALSAMINACEÆ.

Native of India.	Height. 5 feet.	Flowers in August.	Duration. Annual.	Introduced in 1830.

No. 892.

The Latin names, Impatiens and Noli me tangere, and the English names Touch-me-not and Quick-in-hand, are sufficiently expressive of the elasticity of the sutures of the seed vessels, which, if touched when ripe, jump from their attachment and disseminate the fruit. This species, longicornu, or long-horned, was figured in the Floral Cabinet as Impatiens picta, a name which could not be retained, on account of the priority of Dr. Wallich's, which we have used.

At first sight this plant may be taken for a pale-flowered variety of Impatiens glanduligera, but when the leaves, &c., are closely examined a satisfactory distinction will be readily perceived. Like others of this handsome genus of plants, it is a highly desirable addition to the flower garden, as well for its beauty as its novelty. It grows from four to six feet high, and ripens seeds in abundance. These may be sown in pots or the open ground, in April; and, when about two inches high, should be transplanted, singly, into situations where their height is unobjectionable, and where coarser tall plants do not intrude on them.

"Much discussion," says Dr. Lindley, in the Botanical Register, "has taken place within a few years among botanists as to the real nature of the parts which constitute the very irregular flower of a Balsam. According to Röper and others, the two membranous external scales, and the spur, alone belong to the calyx, of which the two other sepals are usually deficient on that side of the flower which is opposite the spur; on the other hand, the corolla consists of the large upper or back-piece, and of the two lateral inner wings, each of which last consists of two petals; and this view has been adopted by me in the Natural System of Botany, page 138."

"Achille Richard considers the two smaller exterior scales, together with the spurred and the back interior pieces, as forming a four-leaved calyx, while he regards the two innermost lobed pieces as two pairs of petals of a four-leaved corolla. Bernhardi regards the exterior scales as bracts, the spur and the back piece as the calyx, the other parts of it being rudimentary or missing."

"Kunth considers the large back piece of the flower to be composed of two sepals, and together with the spur and exterior scales to form a five-leaved calyx; while he finds in the two innermost parts a corolla of four petals, united in pairs, and he assumes the fifth petal to be abortive. This opinion has been adopted by Arnott, in 1833, and by Presl, in 1836; the latter having discovered the fifth petal to be sometimes present in the garden Balsam." These are speculations not unworthy the attention of the scientific morphologist.


Cineraria tussilaginoides-cruenta.
Lonicera oblongifolia.
Oxalis Piottæ.
Cistus roseus.

CINERA'RIA TUSSILAGINOI'DES-CRUEN'TA.

WATERHOUSE'S CINERARIA

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Hybrid Origin.	Height 1 foot.	Flowers in Mar., April.	Duration. Perennial.	Raised in 1838.?

No. 893.

The name, Cineraria, is derived from CINERES, signifying ashes; applied on account of the grey ash-like appearance of the leaves. This variety of of Cineraria was raised in the garden of Job Waterhouse, Esq., of Halifax, and its name sometimes Latinized into Waterhousiana.

It is by no means an objectionable practice to commemorate, in plain English, the name of the originator, or place of the origin of hybrid plants; but in all cases, where it is possible, it seems to us a far more useful practice, when an approach towards a systematic name is aimed at; and when the origin of a hybrid plant is known, to render this knowledge permanent, by the union of the names of the two species from which it originated, and attaching them as its specific appellation. Thus, in the present instance, we unite the names of the two parents, tussilaginoides and cruenta, as a specific name. It would be more conformable to classical learning, to place the name of that plant first from which the pollen was obtained, but we have preferred the contrary practice, and placed that first from which the seed was procured, on account of the

greater certainty of its being correctly ascertained. This plan of naming hybrid productions we suggested, in this work, several years ago; some of our contemporaries have used it, and, we hope, from the advantages it offers to the florist, as well as the scientific botanist, it may be generally followed, until a more advantageous method can be proposed, which, when it is, we shall have pleasure in adopting.

The genus Cineraria has become highly attractive, from the superior seedling varieties which have of late been raised. Mr. Waterhouse's plant first called attention to the capabilities of the genus, and this is being followed up with considerable attention by many ingenious gardeners and amateurs. They are most desirable ornaments for the greenhouse, and equally so as window plants, demanding but little care, and producing blossoms for a considerable length of time.

It should be planted in a rich soil, have plenty of pot room when it is about to flower, and be occasionally watered with liquid manure. After the flowering season is over, the offsets should be divided, and planted singly, in small pots. Cinerarias are very subject to be attacked by the aphis in spring; when this occurs, they must be timely fumigated. With single plants, this is most easily accomplished by putting them into a close box, and introducing the bowl of a lighted tobacco pipe, and blowing it till the box is filled with smoke. It may then be kept close for an hour, when the plant should be taken out; and, on the following day, be well watered over head, and thereby cleaned.

LONI'CERA OBLONGIFO'LIA.

OBLONG-LEAVED HONEYSUCKLE.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. CAPRIFOLIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	6 feet.	April, May.	Perennial.	in 1823.

No. 894.

Adam Lonicer, after whom the name Lonicera was adopted, was a celebrated German naturalist.

A fair correspondent asks 'why have not the Honeysuckles a place amongst the beauties of the Botanic Garden?' certainly, we reply, not from their want of valuable properties as garden ornaments; they have waited for admission, with a crowd of others, all of which present their pressing claims. Some have preference as foreign potentates, some as unknown strangers, some for their simple beauty. All are acceptable, and shall have attention.

The genus Lonicera has been, by some authors, divided into two—Lonicera and Caprifolium; the Xylosteum too, of Tourneforte, belonged to Lonicera. These divisions are unnecessary, inasmuch as the genus is small, and the distinctions unimportant.

Lonicera oblongifolia is less showy than some others of the genus, and usually a shorter plant, therefore should be planted near to the outside of the shrubbery. The most easy method of increasing it, is by layering it in spring, when it will readily root, and young plants be obtained.

OX'ALIS PIOT'TÆ.

PIOTTA'S WOOD SORREL.

Class.
DECANDRIA.

Order.
PENTAGYNIA.

Natural Order.
OXALIDACEÆ.

Native of	Height	Flowers in	Duration	Introduced
C.G.Hope.	3 inches.	June.	Perennial.	in 1816.

No. 895.

The Greek word on which the name of this genus is founded, alludes to the sour taste that prevails amongst its species, which are very numerous; not less, perhaps, than two hundred; chiefly natives of the Cape of Good Hope, or at least of the souththern districts of Africa. A few of the later introductions have, however, been from that grand dopôt of vegetable riches — South America.

Oxalis Piottæ is a showy and free flowering plant, that may be very well grown in a sitting-room window, where it will flower in May. By the month of July it will have done growing, and may then be laid aside, without water, till the end of November. The bulbs should then be taken out of the old soil, and repotted in fresh sandy compost, and have a little water once a week, gradually increasing the quantity, and applying it more frequently, as the plant increases in growth. As its time of flowering approaches, and whilst it is in flower, it should have a liberal supply of water. Most plants demand more water at this period of their existence than at any other; a fact to which we would call constant attention.

CIS'TUS RO'SEUS.

ROSY ROCK ROSE.

Class. POLYANDRIA. *Order.* MONOGYNIA.

Natural Order. CISTACEÆ.

Native of	Height.	Flowers in	Habit	Introduced
S. Europe.	3 feet.	June.	Shrub	in 1830?

No. 896.

The name, Cistus, is of Greek origin, and bears an allusion to the matured seed-vessel. See No. 649.

One of the prominent characteristics of the flower of the Cistus, is strongly marked in that which we have now figured, we allude to its crumpled petals. These exist in their wrinkled state before they expand, and retain the peculiarity till their decay. Another characteristic of the flower, and it is probable that a connection may be traced between the two peculiarities, or that they may be referred to the same predominating condition of the plant, is the fugacious character of the petals. They last but a day, but have immediate successors.

"Yet though the gauzy bells fall fast,
Long ere appears the evening crescent;
Another bloom succeeds the last,
As lovely, and as evanescent."

The very multitude of the flowers produced by the Cistus, is sometimes made a charge against it. Who has not heard it said of that shrub, usually known as the Gum Cistus, that its flowers are gay and beautiful, and has not heard this praise abated

by the context 'But they make a sad litter.' How difficult it is to please human nature; yet how nicely contrived is everything in creation, to satisfy its wants and administer to its luxuries!

Our Cistus roseus, was drawn in the Birmingham Horticultural Society's Garden, and is one of the very showyest, even amongst the many species of this showy genus. The blaze of beauty from a clump of Cistuses, and a moment's thoughtfulness on their fleeting character, could scarcely fail to recal the ideas of Herrick, given to the public two hundred years ago.

FAIR pledges of a fruitful tree
Why do ye fall so fast?
Your date is not so past,
But you may stay here yet awhile
To blush and gently smile,
And go at last!
What! were ye born to be
An hour or half's delight,
And so to bid good-night?
'Tis pity Nature brought ye forth
Merely to show your worth,
And lose you quite!
But you are lovely leaves, where we
May read how soon things have
Their end, though ne'er so brave:
And after they have shown their pride
Like you, awhile; they glide
Into the grave.

The Cistus roseus is perfectly hardy, when planted in a sandy light soil, in a dry situation. May be increased in summer, by cuttings.

Orobus Gmelini. 1/2

Linaria alba.

Rhododendron campanulatum. 1/2

Crocus speciosus.

Mills. del. 225 Watts. sculp.

OR'OBUS GMELI'NI.

GMELIN'S BITTER VETCH.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Siberia.	Height 8 inches.	Flowers in May.	Duration. Perennial.	Introduced in 1827.

No. 897.

The word Orobus indicates a stimulating or fattening effect on oxen, see No. 284. Gmelini is adopted as a specific name by Fischer, the well-known Russian botanist, in compliment, it may be presumed, to some of the descendants of John George Gmelin, a native of Tubingen, whom Linneus himself honoured by naming a genus Gmelina. He was professor of Natural History in the Academy of Sciences of Petersburgh, a situation which was subsequently occupied by younger branches of the same family.

The Orobus Gmelini is an ornamental small perennial plant, deserving a place amongst hardy exotics, as a subject of rarity, and occupying but little space. The Natural Order, Leguminosæ, to which it belongs, is one of the most extensive and important amongst vegetables. Medicine and the arts owe much to it. Independently of agricultural plants, as Peas, Beans, Clover, and others, many gums, medicinal drugs, dyes, ornamental woods, &c., are the produce of leguminous plants.

This Orobus is of easy culture, but should not have a wet situation, or be over watered if in a pot.

LINA'RIA AL'BA.

WHITE FLOWERED TOAD-FLAX.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
SCROPHULARIACEÆ.

Native of	Height	Flowers in	Duration.	Introduced
Europe.	9 inches.	July & Aug.	Perennial.	in 1838.?

No. 898.

Linaria has been explained under No. 34.

This is a pretty and distinct perennial species of Linaria, for which we are indebted to Mr. Cameron, of the Birmingham Horticultural Society's garden. It will be desirable, in the flower garden, as a pretty specimen of one section of the Natural Order Scrophulariaceæ. The peculiar shape of its corolla cannot escape the notice even of the most careless observer, and it may be, naturally enough, inquired why the Linaria demands that its parts of fructification should be so nicely protected, by being thus completely inclosed. Botanically considered, there does not appear to exist any singularity of formation which would indicate, to our obtuse perceptions, the necessity of such arrangement. Indeed, we are shown in this very genus, that the irregularity of corolla, here alluded to, is occasionally dispensed with, since the Linaria vulgaris, or common toad-flax has sometimes a completely regular and expanded corolla. It is however, evidence of the omnipotent power of the great originator of both the one and the other. It may be planted out, or kept in pots.

RHODODEN'DRON CAMPANULA'TUM.

CAMPANULATE RHODODENDRON.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of Nepal.	Height. 5 feet.	Flowers in April, May.	Duration. Perennial.	Introduced in 1817.

No. 899.

The derivation of the name has been explained.

The species of this favourite genus which is now figured, is a native of Nepal, and has been regarded as a frame plant, but the severe winter of 1837-8 proved, as observed by Dr. Lindley, that "the magnificent Rhododendron Campanulatum was added to our own list of common shrubbery plants." The late David Don remarks that it was first raised here from seeds received from Dr. Wallich. The flowers are of a milk white, shaded with lilac, and surpass all others of the genus, with the exception of one discovered in Java, by Dr. Horsfield, the dimensions of whose corolla are still greater.

Our drawing was made from a fine plant, six feet high, in the garden of George Barker, Esq., of Springfield, near Birmingham, who possesses a rich collection of Rhododendrons, in a fine and vigorous growth.

Rhododendron campanulatum may be planted in the peat borders, where it will bloom freely, when the plant has attained a good size. It may be increased by layering, by seeds, and by grafting.

CRO'CUS SPECIO'SUS.

SHOWY AUTUMN CROCUS.

Class. TRIANDRIA. *Order.* MONOGYNIA.

Natural Order. IRIDACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
S. Europe.	5 inches.	Sep. & Oct.	Perennial.	in 1830?

No. 900.

Although we now use very many of the names of plants which were common amongst the Greeks, two or three thousand years ago, still it is not presumed, except in very few instances, that they are attached to the same subjects as originally. The ancient descriptions are so vague that they rarely enable us to distinguish the plants to which they were intended to apply; it is believed, however, that Crocus was used by the ancients as the name of some species of the genus to which it is applied at the present day.

Were it not for so great an authority as the Hon. and Rev. W. Herbert, we should not hesitate to pronounce this plant identical with the English species nudiflorus, but Mr. Herbert has doubtless, seen them cultivated together, and has legitimate reasons for objecting to the two species being considered as mere varieties, the one of the other.

In our plate of this interesting Crocus will be seen both flowers and foliage; but it must be remembered that in the garden they will not be met with together. The drawing of the flower was made in the first week of October, that of the

foliage in the last week of April. Thus the naked flowers are produced, like the Colchicum, in the autumn; and also like this plant is its semination, the germen remaining beneath the soil at the time the flowers appear, but are pushed upwards, to the surface of the earth, in the spring; there to ripen, when the leaves also of the plant are produced, for the succour of both seed and bulbs.

In the spring of the year we see the Crocus glowing every where — welcome alike to the peer and the peasant—the harbinger of a joyous season; but how rarely do we see it enlivening the borders in autumn, notwithstanding nature has provided us with species for the purpose. Well may we ask with White—

> "Say, what impels, amidst surrounding snow
> Congeal'd, the Crocus' yellow bud to blow?
> Say, what retards, amidst the summer blaze,
> Th' autumnal bulb, till pale declining days?
> The God of Seasons—whose pervading power
> Controls the sun, or sheds the fleecy shower;
> He bids each flower his quick'ning word obey,
> Or to each lingering bloom enjoins delay."

Whether this beautiful autumnal flowering Crocus may, or may not, be called a British plant, it deserves a place amongst every respectable collection of flowers; indeed the British autumnal flowering species and this identical plant, should be obtained, as well for their individual value as for ascertaining their identity. We received our specimen from the Messrs. Pope and Sons, and are informed that it proves to be perfectly hardy, and will flourish in any garden soil.

Cypripedium pubescens. 1/2

Halesia tetraptera.

Rhododendron Caucasicum-ponticum.

Phlox pyramidalis.

Miss Maund del. 226 Watts sculp.

CYPRIPE'DIUM PUBES'CENS.

PUBESCENT LADIES' SLIPPER.

Class.
GYNANDRIA.

Order.
DIANDRIA.

Natural Order.
ORCHIDACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
N.America	1 foot.	May, June.	Perennial.	in 1790.

No. 901.

Cypripedium is compounded from the Greek words KUPRIS, and PODION; the first a title of Venus, the latter signifying a slipper.

That so curious and interesting a genus of plants as the Cypripedium, should be difficult of increase, and indeed of cultivation, can but be regreted. True, however, it is, that few persons are successful in their attempts to keep them in health, and increase them. Even our own British species, the Cypripedium calceolus, found in the north of England, is rarely met with in gardens, although so perfectly hardy.

Every admirer of flowers can but desire to possess one or other of the several interesting species of Cypripedium, and pubescens will be found to be of as easy management as any amongst them. It is very hardy, and should be planted in a border of sandy peat, in a northerly aspect, and there remain undisturbed, where it will slowly increase, and blossom in perfection every year. It may, by some, be thought unnecessary, yet, during winter, we prefer bestowing a three-inch coverlet of sawdust or moss on its bed.

HALE'SIA TETRAP'TERA.

FOUR-WINGED SNOWDROP TREE.

Class. DODECANDRIA. *Order.* MONOGYNIA.

Natural Order. STYRACEÆ.

Native of	Height	Flowers in	Habit	Introduced
Carolina.	10 feet.	April, May.	Tree.	in 1756.

No. 902.

The genus Halesia was named in honour of Doctor Stephen Hales, author of Vegetable Statistics. This plant is called Snowdrop Tree from the resemblance of its flowers to the Snowdrop. We fear that these are represented in our plate as somewhat less pendulous than the common habit of the plant would warrant; a circumstance that may have arisen from their having been conveyed some distance to be drawn.

This, as it is sometimes cultivated, forms an ornamental middle-sized shrub, but it may be grown as a tree; and from its statistics in Loudon's Arboretum Britannicum, we find that at Syon, the seat of His Grace the Duke of Northumberland, there is a tree of the Halesia tetraptera, thirty feet high, and its trunk eighteen inches diameter. It is also growing, of various sizes, at Bagshot Park, Trentham, Alton Towers, Toward Castle, in Scotland; and Ballyleady, in Ireland; still, there is occasion to repeat what was said by Dr. Sims, nearly forty years ago—"We are surprised that a shrub of so much beauty should not be more generally met with in our pleasure grounds."

RHODODEN'DRON CAUCAS'ICUM-PON'TICUM?

HYBRID CAUCASIAN RHODODENDRON.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Of hybrid Origin.	Height 3 feet.	Flowers in May, June.	Habit. Shrub.	Raised in 1836?

No. 903.

For the meaning of Rhododendron, see No. 63. To our compounded specific name we attach the mark of doubt, having no further evidence than the apparent character of the plant, for believing that it originated from Caucasicum and Ponticum. This accords with the opinion of the Messrs. Pope, to whose favour we are indebted for the original specimen. It is known in nurseries as the Rhododendron splendidum. This variety is a most abundant flowerer, and consequently very showy. It seems to be of more dwarf habit than most of its near allies, and assumes a compact and bushy growth. It is an early flowerer, succeeding Caucasicum, and is altogether a very desirable addition to the American ground.

Like others of this splendid genus it grows the most luxuriantly in peat soil, with the addition of either much or little sand. Plants of the finest growth are those raised from seed; to perpetuate, however, the true character of this or any other hybrid, even if it produce seeds, increase must be obtained either from layers, or by grafting them on other species.

PHLOX PYRAMIDA'LIS.

PYRAMIDAL PHLOX.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. POLEMONIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
N. America	4 feet.	June, Sept.	Perennial.	in 1800.

No. 904.

Phlox, see No. 6. Pyramidalis alludes to the pyramidal shape of the inflorescence of the Phlox now figured. Our drawing is of a side stem only, many of which, arranged round the main stem as an axis, form the pyramid.

This is an exceedingly handsome, rather tall-growing, Phlox; with flowers somewhat smaller and rounder than most of the upright species. Although the whole of them make a fine display when the plants become large, and send up many flowering stems, they are, notwithstanding, as regards either the size or number of their flowers, in no degree comparable with young plants which have only one or two stems. Some kinds are also liable to perish, when allowed to become large, by remaining long undivided. The mass of roots they form, either exhaust the soil with which they come in contact, of all the properties that are nutritious to the Phlox, and thus they are literally starved to death, through want of food; or else, according to the more modern theory, they deposit so much of an excrementitious matter, injurious to the plant, that they are quickly poisoned to death, unless removed from its influence.

Either the one or the other of these circumstances is continually producing a greater influence on almost all the plants in our gardens than is thought of by most amateur cultivators. It is not uncommon to hear, even careful cultivators of flowers, complain in regard to some of their favourite plants, that "They grow nicely for a year or two, and then they die." Now, if a plant blossom twice in the same garden, the loss of it afterwards must be referred to careless culture, unless it fall under the influence of unusually severe weather, a reason which can but rarely be legitimately advanced. Losses usually arise from the omission of necessary division, or propagation by other means. Young plants bear the vicissitudes of an uncongenial climate better than old ones; and furthermore, our soil may not be rich in the species of nutriment required by some of the exotic plants which we cultivate, therefore fresh pasturage should be frequently given them.

Although the Phlox pyramidalis is perfectly hardy, still, if it be left growing in one place more than a single year, it will decline in health; and in many places, in three years, be altogether lost.

The most successful mode of treatment is this; take off some of the young shoots in September, with a little of the root attached, and plant them, singly, about six inches apart, in a light soil, giving them a little water occasionally, if the autumn be dry. In February or March they may be removed to the situations in which they are to flower. The success which will succeed this trifling attention, will amply repay the trouble bestowed on them.

Paeonia festiva. 1/6

Iris flavissima. 1/6

Primula ciliata. 1/6

Amygdalis pedunculata.

PÆO'NIA ED'ULIS FESTI'VA.

HANDSOME EDIBLE PÆONY.

Class.
POLYANDRIA.

Order.
DIGYNIA.

Natural Order.
RANUNCULACEÆ.

Raised in Belgium?	Height 2½ feet.	Flowers in July.	Duration Perennial.	Raised in 1838?

No. 905.

The Greeks adopted the name Pæonia for a plant, in honour of one of their eminent fabulous personages. We say fabulous, because the ancient Greek poets invented very many of their heroes of verse; it should, however, be remembered that they usually founded the character of these heroes on some original or type, with which they took a poet's unlimited licence, and exaggerated the deeds of their original to make them the achievements of either angels of darkness or angels of light, as suited best their purpose. Pæon was represented as a physician, in the Trojan War, and as curing even the very Gods of their wounds. Hence physicians were sometimes called Pæonii, and medicinal herbs Pæoniæ herbæ.

The common Pæony of our gardens, — the Pæony officinalis, was formerly a plant of the London Pharmacopœa, and its roots prescribed in epiliptic diseases; but it has latterly been omitted, as of little value.

It has ever been our endeavour to have the drawings for the Botanic Garden made with the utmost fidelity, from living plants; and never to suffer ex-

aggeration in them, that they may produce effect by size and gaudy colouring, to excite the astonishment of those unacquainted with the practice. In the instance, however, of the Pæony now figured, we have been dependent on a drawing of it made in France—at Liege; where, we believe, the plant was raised. A fine engraving of it has been introduced to the notice of the florists of England, by M. Jacob Makoy, nurseryman of Liege; and plants have been purchased at a high price, on the faith of the representation. Our figure is a faithful reduction of that of M. Makoy, and is one-fifth of the size; hence it will be seen that the full size of the flower is more than six inches across. It was named merely Pæonia festiva, but as it is an undoubted descendant from edulis, or albiflora as it is sometimes called, we have affixed its proper specific name, with the minor distinctive term, festiva. It is, doubtless, one of the most splendid herbaceous Pæonies ever introduced to our gardens — a rival of the finest varieties of moutan.

It may not be uninteresting to some of our readers to know that seeds may be obtained from many of the double Pæonies, provided their stigmas be fertilized with the pollen of a single variety. This genus seems to offer great temptation to hybridizers. Ere long we may, probably, see flowers of the mixed character of the bold crimson officinal Pæony, with the delicate albiflora festiva, or albiflora Whitlejii, eclipsing all other denizens of the garden. The Messrs. Pope, of the Handsworth Nursery, have obtained plants of Festiva, from Liege.

I'RIS FLAVIS'SIMA.

YELLOWEST IRIS.

Class.
TRIANDRIA.

Order.
MONOGYNIA.

Natural Order.
IRIDACEÆ.

Native of Siberia.	Height. 8 inches.	Flowers in May, June.	Duration Perennial.	Introduced in 1814.

No. 906.

Iris, see No. 278. The specific name, flavissima, being, as it is, in the superlative degree, would lead us to expect, in this Iris, a more brilliant yellow than is shown by our plate; it is, however, closely copied from nature. It prefers a rather strong soil; is not of robust growth, nor does it increase so rapidly as many others. It is a free flowerer, and should have a place in every collection, although its flowers are not brilliantly coloured.

In reference to the consideration of colours, we have usually found that the black soil of old gardens, similar to that in which this plant grew, rarely affords flowers with colour either so deep or bright as fresh earth of redder tint. The rich deep-coloured wall flowers, sometimes called bleeding hearts, growing against a country cottage, may have met the admiration of many of our readers; and some may have proved that by transplanting them into town gardens, of black earth, they have become comparatively pale and ordinary coloured. This, it is possible, since acids heighten the tint of many yellows and reds, may arise from the

deficiency of oxide of iron in such soils. Liebeg says, however, "It must be ammonia (an alkali) which forms the red and blue colouring matters of flowers."

On no subject is human knowledge more defective, than that of the production, and changes, of colours. Several theories have been promulgated in different ages, but still none that has been generally accepted. Although astonishing advances in science have lately been made, still our knowledge on this head, may well keep us humble minded.

A few facts, proved by Dr. Lewis, may interest our readers more than speculation. Yellow flowers, unlike all others, communicate to water or to spirit of wine, durable yellow colours, not alterable, but in degree, by acids or by alkalies; the former only rendering them paler; and the latter rendering them deeper. Wool or silk, impregnated with a solution of alum or tartar, receives, on being boiled with the watery infusion or decoction, a durable yellow dye. A durable yellow lake is prepared, by precipitating with alum, an infusion of yellow flowers made in an alkaline ley. In some of the orange coloured flowers, the yellow matter seems to be of the same kind as that of the pure yellow flowers; but the red matter seems to be different from that of the pure red flowers. The yellow matter is extracted from these flowers by water; and the remaining red matter is extracted by spirit of wine, or by a weak solution of a fixed alkali, in water. This curious instance of discrepancy in two colours, has been noticed under Carthamus tinctorius, No. 162.

PRIM'ULA CILIA'TA.

CILIATED SWISS PRIMROSE.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
PRIMULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Switzerld.	3 inches.	April, May.	Perennial.	in 1700.

No. 907.

Primula, see No. 156, for its meaning.

It is always a pleasing labour to us to introduce to our readers desirable and thoroughly hardy species of plants, wherewith they may ornament their open borders, mounds, and fancy parterres, in full assurance that they will grow and luxuriate, regardless of the nicer attentions demanded by such exotics as require to be expensively kept in an artificial or greenhouse temperature, and in perpetual danger of death, from excess of nursing. In the Primula family, many are proof against cold, but pure air is important.

Of the hardy Primula ciliata two varieties are known in cultivation, that which we have now figured, and one with much paler flowers. Both are showy, but our darker flowering one is the most robust plant, and blossoms the most freely. It is nearly related to decora, villosa, helvetica, and nivalis; and like these species, very ornamental for the front of beds, especially when kept in tolerably large patches. It loves a rich soil, and open situation; and should be divided early in autumn, in preference to spring.

AMYG'DALUS PEDUNCULA'TA.

PEDUNCULATE ALMOND.

Class.
ICOSANDRIA.

Order.
MONOGYNIA.

Natural Order.
ROSACEÆ.

Country	Height	Flowers in	Habit	Introduced
Unknown.	5 feet.	April, May.	Shrub.	in 1836.

No. 908.

The word Amygdalus, was deduced from the Greek AMUSSO, signifying to lacerate. It was adopted in allusion to the lacerated or fissured nut of the almond. This shrub has sometimes been called, after Ledebour, Amygdalus Pallasii, but improperly, inasmuch as Pallas himself had previously named it pedunculata, and by this name too, Ledebour himself sent the seeds to this country.

With the specimen from which our drawing was made, we were favoured by Mr. Cameron, curator of the Birmingham Horticultural Society's Garden; who states that he raised it from seeds, received from Professor Ledebour. It was also raised in the London Horticultural Society's Garden, from seeds obtained from the same source; and it is noticed by Mr. Gordon of that establishment, as a very pretty dwarf decumbent bush, and quite hardy. It doubtless, is a pretty shrub, but it seems questionable whether it should be called decumbent.

This shrub seems likely to grow freely in any common soil; and from its dwarf habit should be planted near to the front of the border.

Eucharidium concinnum. 5/6

Campanula alpina. 5/6

Azalia lediſolia. 5/6

Mesembryanthemum tricolor. 5/6

Miss S. Maund del. 228 Winter, sculp.

EUCHARID'IUM CONCIN'NUM.

NEAT EUCHARIDIUM.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ONAGRACEÆ.

Native of N.America.	Height 1 foot.	Flowers in April, Sept.	Duration Annual.	Introduced in 1836.

No. 909.

The name, Eucharidium, is deduced from the Greek EUCHARIS, agreeable. The Latin specific name also, is intended to imply that the plant is handsome; hence, we infer that it made a favourable impression on the minds of its nomenclators —Fischer and Meyer, botanists of Russia.

The Eucharidium concinnum, was received into the Imperial gardens of St. Petersburg, from the Russian colony of Ross, in New California; and from that establishment transmitted to the Horticultural Society of London; whence it has been distributed to its members. It must be gratifying to the philanthropist, as well as the botanist, thus to witness the amicable intercourse extended and fostered between the inhabitants of distant parts of the globe. National amity, as well as individual friendships, may thus be engendered and perpetuated. Who cannot appreciate the pleasures of communication, through the medium of a garden!

This novelty resembles a prostrate plant of Clarkia pulchella, but is of more dwarf appearance. It may be sown in the open borders, in spring, and it will flower and ripen seeds abundantly.

CAMPAN'ULA ALPI'NA.

ALPINE BELL-FLOWER.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. CAMPANULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Switzerld.	6 inches.	July.	Perennial.	in 1779.

No. 910.

The derivation and the meaning of the name of the genus now before us will, we trust, not be forgotten by our readers. The names of plants so frequently lead to a knowledge of some prominent character, or peculiarity, belonging to them, that it appears indispensable that they should be understood as soon as heard. If the plant be unknown its name alone may, perchance, give some indication of its character.

A property of all species of Campanula, not observed by every one, is their containing a milky fluid. This was known to the old herbalists, for Parkinson, in noticing the very plant under consideration, says "The whole plant hath a soft doune, somewhat whitish upon it, and giveth milke, as all the rest doe."

This plant is mentioned by Mr. Curtis as one of the introductions, from Austria, to the splendid establishment of the Messrs. Loddiges. It requires to have a dry situation, hence a place on raised rock-work is favourable to its growth. If potted, for keeping with alpines, the proper compost for it is loam and peat.

AZA'LEA LEDIFO'LIA.

LEDUM-LEAVED AZALEA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of China.	Height 4 feet.	Flowers in March, May.	Duration Perennial.	Introduced in 1819.

No. 911.

The word Azalea, is from AZELEOS, see No. 541.

This beautiful Azalea has not, from its first introduction to this country, ceased to excite admiration. Both this and the purple variety of Ledifolia yield to none in their splendid display of flowers, when well grown; indeed, all the Indian and Chinese species are exceedingly fine, but Ledifolia is the freest flowerer. In some instances it has borne full exposure in the open garden, and flowered in perfection; but as uncertainty will attend the success of this treatment, we recommend its being cultivated as a window plant, for which purpose it is admirably suited, both as regards its constitution, and its habit of growth, which is more compact and bushy than any other of the Indian species.

Being so nearly hardy, it should be kept in an apartment without fire, and have plenty of pot room. It should be planted in a mixture of peat and a little loam; and although it will require but little water during winter, it must be very freely watered whilst in a growing state, and especially whilst in flower. A day's thirst at this time would injure its blossoms. At this time, too, it may with

advantage, be placed in a warmer room; as additional excitement, when the plant is coming into flower, produces on it a very genial influence. These gay shrubs may be easily increased from cuttings of the young wood, taken off about midsummer. Take a pot, according to the size of the bell-glass you intend using; in the absence of a bell-glass use a large tumbler. Half-fill the pot with drainers, (that is, potsherds—broken pots; and if none of these can be had, soft bricks or tiles broken to pieces will suffice), on these put a layer of sandy peat, and on the top of this, a layer an inch deep of silver sand, which may be had of any nurseryman. Wet this to make it solid, and it will be fit to receive the cuttings. Press on the sand, the glass with which the cuttings are to be covered, that it may leave an impression of its size, as a guide for inserting the cuttings. When cuttings are taken from the terminations of old branches, they must be cut off at the union of the young wood with the old; but if cuttings be chosen that have sprung from the sides of old shoots, they may be slipped off, and the ragged ends shortened, which will fit them for insertion. They should then be inserted in the sand, so deep as nearly to reach the peat, through the sand, have a gentle watering, and the glass may then be turned over them to remain. If put in a gentle hot-bed the cuttings will strike much sooner; they may, however, be kept in any convenient place, chiefly in the shade, and will require to be regularly watered. The glass should be removed for a few minutes occasionally, from the cuttings, and wiped dry.

MESEMBRYAN'THEMUM TRICOL'OR.

THREE-COLOURED FIG-MARIGOLD.

Class.
ICOSANDRIA.

Order.
DI-PENTAGYNIA.

Natural Order.
MESEMBRYACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
C. G. Hope	6 inches.	July.	Annual.	in 1795.

No. 912.

Mesembryanthemum, a word compounded of the Greek MESEMBRIA, mid-day; and ANTHEMON, flower. The word thus constituted, bears an allusion to the general habit of the genus, in its blossoms expanding in mid-day, and closing by night.

The Mesembryanthemums are an odd collection of creatures. Their leaves are always more or less thick and succulent, and assume such curious shapes. Some are round and solid as a pear; some as nuts, berries, puff-balls, or figs; others with tooth-fringed leaves, bear a resemblance to the jaws and teeth of wolves, mice, tigers, cats, &c., after which they are named. Others resemble horns, sickles, half-moons; and many other singularities may be found amongst them; and nearly all may be grown with a small amount of attention.

Our present species is a half-hardy annual, requiring to be sown on a slight hot-bed, and transplanted into small pots, preparatory to their being turned into the borders in the beginning of June. Exposed plants will not always ripen seeds, therefore one or two should have protection in pots, to prevent disappointment.

Magnolia Soulangiana. 2/1

Fabiana imbricata.

Acacia armata. 2/3

Lonicera Chinensis. 2/1

MAGNO'LIA SOULANGIA'NA.

SOULANGE'S MAGNOLIA.

Class.
POLYANDRIA.

Order.
POLYGYNIA.

Natural Order.
MAGNOLIACEÆ.

Hybrid Origin.	Height. 5 feet	Flowers in May, June.	Habit. Shrub.	Raised in 1826.

No. 913.

Peter Magnol was a French botanist of some note in the seventeenth century.

This hybrid Magnolia was raised near Paris, in the garden of the Chevalier Soulange-Bodin, after whom it is named. It was raised from seeds of Magnolia conspicua, and there would perhaps be but little hesitation in pronouncing its other parent to be purpurea; this, however, is said not to be the fact, but that it was tomentosa.

Our drawing was made from a small standard plant growing in an exposed situation, where its flowers did not expand so freely as against a wall. But, as is our rule, it was represented as nature gave it; not magnified, or emblazoned agreeably to the imagination of the artist or his directors.

This Magnolia forms a more compact shrub, as a standard, than most others of the genus; and it flourishes in any light loamy soil. It is, however, much increased in beauty of flowering when trained to a wall of good aspect. Here the flowers grow to a larger size, and they expand more completely, exposing fully their green spiked carpels, surrounded by their numerous linear anthers.

FABIA'NA IMBRICA'TA.

IMBRICATE-LEAVED FABIANA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
SOLANACEÆ.

Native of Chili.	Height 21 inches.	Flowers in June.	Habit. Shrub.	Raised in 1837.

No. 914.

The appellation, Fabiana, has been adopted in honour of a Spanish botanist of that name.

This country is indebted to Mr. Cuming for the possession of this curious heath-like plant; it was, however, previously published in the Flora Peruviana, having been discovered in Western South America, by the botanists attached to the Spanish survey of that country.

A newly-discovered hardy or half-hardy heath will always be an object of interest; and the present plant has so exactly the general appearance of one, that it is just as desirable. It has all the neatness and abundance of flowers of some of the best individuals of that genus; and their habit also, though belonging to a rather distant order.

This novel little shrub has proved tolerably hardy, but may require the assistance of a little defence against severe frosts. It should have a dry situation, and probably sandy peat would suit it better than common soil. Cuttings will strike root quickly, when treated as those of heaths. A plant should be kept in the frame, as a protection against loss, by unexpected severity of weather.

ACA'CIA ARMA'TA.

SIMPLE-LEAVED PRICKLY ACACIA.

Class. POLYGAMIA. *Order.* MONŒCIA.

Natural Order. LEGUMINOSÆ.

Native of	Height	Flowers in	Habit.	Introduced
N.Holland	10 feet.	Mar. Apr.	Shrub.	in 1803.

No. 915.

The word, Acacia, is supposed to have had its origin in the Greek AKASO, to sharpen; in allusion to the sharp stipules of many Acacias.

The genus Acacia is quite a monster in extent, a heterogeneous mass. Decandolle, twenty years ago, described nearly five hundred mimoseous plants. Fifteen hundred, it is probable, are now known, of which Acacia contains by far the greater number; indeed, the genera Inga and Acacia seem to be the receptacles for all those species to which no other resting place can be allotted. We are, however, glad to notice that Mr. Bentham has undertaken a re-arrangement of this section.

A primary subdivision of this genus has been proposed by Mr. Bentham, dependant on a character which may be examined in our present plant; one that is so remarkable, and easily distinguished, that it is a convenient division, although not an excellent botanical section, from its presenting no peculiar modification of flowers or fruit.

The character to which we allude is the presence of what are called phyllodia, instead of true leaves. This peculiarity may have escaped the observation

of many of our readers, but as it is interesting to the general observer, as well as the botanist, we shall annex Dr. Lindley's remarks on the differences between phyllodia and leaves. He says, —

"The petiole becomes so developed as to assume the appearance of a leaf, all the functions of which it performs, They may always be distinguished from true leaves by the following characters:— 1.—If observed when the plant is very young, they will be found to bear leaflets, 2.—Both their surfaces are alike, 3.—They very generally present their margins to the earth and heavens; not their surfaces. 4.—They are always straight-veined; and, as they only occur among dicotyledonous plants, this peculiarity alone will characterize them."

Although this plant succeeds well with frame protection, or in mild winters, against a south wall, we recommend it as a window plant, than which none is more beautiful, or more easily managed. It should be potted in a compost of loam, peat, and sand; and may be increased by cuttings of the young wood in summer. A south window, in a room without fire, suits it best; except in severe frosts, when it must be removed during the night. In winter it should be watered very sparingly, but freely when in flower. Before its last flowers have fallen, cut it back, as much as is required to give the plant a regular shape. From the middle of June to the middle of September, plunge its pot in the open border of the garden; first keeping it out a fortnight in the shade, as sudden exposure to the open sun would discolour its foliage.

LONI'CERA CHINEN'SIS.

CHINESE HONEYSUCKLE.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. CAPRIFOLIACEÆ.

Native of China.	Height. 30 feet.	Flowers in June, July.	Habit Shrub.	Introduced in 1806.

No. 916.

Lonicera, for its derivation see No. 894. This favourite shrub, like many others, has had much occasion for offence, from being so perpetually nick-named. Besides the name for it which we have adopted after Decandolle, it has, by various authors, been called, Lonicera flexuosa, Lonicera Japonica, Lonicera glabrata. Then the changes have been rung upon these specific names in connexion with the generic name Caprifolium; and in Sweet's Hortus Britannicus, second edition, it is mentioned under Kæmpfer's outlandish name of Nintooa Japonica. We notice these discrepancies that our readers may not be puzzled by meeting either the plant, or any account of it, under an appellation differing from that to which we have here given the preference.

Of all the Honeysuckles with which we are acquainted, this is the most beautiful for training against a southern wall. We do not even except our own wild species, the Lonicera periclymenum. Its foliage has a neatness, and variety of tint, not usual in others; its gay flowers are produced in abundance, and their fragrance, although not of

that honied sweetness yielded by the common Honeysuckle, is not less delightful; it partakes of the orange-flower odor, and is by many persons preferred.

Although the Lonicera Chinensis has been for many years known in this country to nurserymen and botanists, still its flowers are rarely seen embellishing the porch of the cottager, or its fragrance inviting the traveller to halt at the roadside inn. There are now, we trust, very few amongst us so wanting in philanthrophy, — so cynical, as not to desire the extension of that taste— that superior civilization, which may induce all classes to assist in producing inexpensive garden beauties, from the actual enjoyment of seeing them, and being instrumental to their existence; in fact, in first creating the scene, and then feeling that it is good.

This plant was, long after its introduction, a nursling of the greenhouse, where it rambles luxuriantly, and by judicious pruning may be kept in perpetual flower. Our business with it, however, is in the open garden, where it may be more the child of nature. Trained to a wall, of southern aspect, it becomes exceedingly ornamental. Here its principal branches should be regularly nailed as they advance in growth, and the weaker ones cut back, to produce neatness and short flowering laterals. It should be planted in a dry soil, and if a wall of good aspect cannot be given to it, a warm and sheltered corner must be chosen. Cuttings of it will strike root under a hand-glass in the open ground, but more readily in a slight hotbed.

Robinia hispida.

Ophrys apifera.

Epigæa repens.

Acanthus mollis.

Mrs S. Mound del. 230 Wimes, sculp.

ROBI'NIA HIS'PIDA.

HISPID ROSE-ACACIA.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of Carolina.	Height. 10 feet.	Flowers in May to Sept.	Duration Perennial.	Introduced in 1743.

No. 916.

The name, Robinia, was adopted by Linneus in honour of Jean Robin, a French botanist, herbalist to Henry IV. of France. He was the first cultivator of the Acacia pseudo-acacia, a tree which many of our readers will recollect, when we remind them of the mania which was excited twenty years ago, by Cobbet, who propagated and sold it in immense quantities, under the name of the American Locust Tree. It shall, ere long, be figured.

The Robinia hispida, or Rose-Acacia, is tolerably well known; but from its brittleness is often broken and destroyed. In the Arboretum Britannicum of Mr. Loudon, we find some practical remarks on this plant; but we cannot refer to this admirable work without joining in the regret that death has just deprived our country of its talented author — one of its most valuable and indefatigable labourers in horticultural literature. The unwearied exertions of Mr. Loudon have, we sincerely believe, been mainly instrumental in effecting the rapid progress made in gardening within the last twenty years. Talents so diversified are rarely combined in a single individual.

There are several varieties of this Robinia; one, the arborea, grows much larger than the common sort. In the Arboretum Britannicum, vol. 2, respecting them it is said. "They form singularly ornamental shrubs for gardens; but, as standards or bushes, they can be only planted with safety in the most sheltered situations. A very good mode is, to trail them against an espalier rail; and, on a lawn, this espalier may form some kind of regular or symmetrical figure; for example, the ground plan of the espalier may be the letters S or X, or a cross, or a star; which last is, perhaps, the best form of all, the different radii of the star diminishing to a point at the top. Such a star, in order to produce an immediate effect, would require to have three plants placed close together in the centre, from which the branches should be trained outwards and upwards. Robinia hispida is often grafted about one foot above the surface of the ground; and, when the plant is not trained to a wall, or to some kind of support, it is almost certain, after it has grown two or three years, to be broken over at the graft. A preferable mode, therefore, for dwarfs, is to graft them on the root, or under the surface of the soil. In purchasing plants this ought always to be borne in mind. In consequence of the liability of this shrub to be injured by the weather, it is comparatively neglected in British gardens; but, wherever a magnificent display of fine flowers is an object, it better deserves a wall than many other species; and it is worthy of being associated there with Piptanthus Nepalensis, Wistaria Sinensis, and other splendid leguminaceæ."

O'PHRYS APIF'ERA.

BEE-BEARING OPHRYS,

Class.
GYNANDRIA.

Order.
MONANDRIA.

Natural Order.
ORCHIDACEÆ.

Native of England.	Height. 9 inches.	Flowers in June, July.	Duration Perennial.	Inhabits Chlky. pstures.

No. 918.

Ophrys, a Greek word, signifying the eye-brow, or eye-lash, it is said by Pliny, was adopted as a botanical name on account of the plant which received it having been used to blacken the eye-brows. Others say, and with more probability, that the name was chosen from the resemblance of the fringe of the inner sepals being like an eye-lash. Apifera from apis, a bee; an allusion which will be at once applied by an inspection of the annexed engraving.

This plant, usually known as the Bee Orchis, has always been an object of admiration, as one of our native plants. Its spontaneous distribution seems to be wholly dependent on geological circumstances. In districts where chalk or limestone prevail, it is not uncommon; but is scarcely ever met with elsewhere.

It is best kept in a pot, in peat and loam, mixed with a good portion of coarse sand; should have a shady situation, never be kept over moist, and have protection from frost in April and May. After flowering, keep it nearly dry, till the following spring; then re-pot and water it more freely.

EPIGÆ'A RE'PENS.

CREEPING EPIGÆA.

Class. DECANDRIA. *Order.* MONOGYNIA.

Natural Order. RHODORACEÆ.

Native of N.America.	Height 6 inches.	Flowers in April, June.	Duration Perennial.	Introduced in 1736.

No. 919.

The prostrate habit of this genus has obtained for it a corresponding name. Epigæa is derived from the Greek EPI, upon; GAIA, the earth. Its specific name, too, further recognises its humble mode of growth.

Although a very lowly shrub, it is one well deserving of cultivation. It is a native of stony places, on the sides of hills, beneath the shelter of stronger subjects; sometimes courting the shade of lofty pines, where man has never intruded the plough or the spade to disturb it of aboriginal possession.

This small shrub may be admitted even to the herbaceous department, without violence to good taste. It is but idle to institute laws to exclude shrubs from amongst herbaceous plants, in the flower garden; or herbaceous plants from every part of the shrubbery. Nature establishes no such principle. Convenience must sometimes be admitted as the law-giver; and, subservient to this, good taste in arrangement can always gratify the eye, by a suitable admixture of plants, whether they be of one class, or of all the classes with

which we are favoured by Nature. Under any circumstances we may agree with Mason in saying,

" To Nature's dictates mild with rev'rence yield;
She with rich colours dyes the laughing field.
Haste then; with flow'rs your varied garden grace;
Flow'rs give a lovelier smile to Nature's face;
Flow'rs are the models fair of brilliant art;
Ye simply-charming tributes of the heart!
Ev'n friendship deigns your gentle aid to prove,
You weave the fairest gift of trembling love;
By you adorn'd more brightly beauty shines,
You 'mid her laurel wreath, proud conquest twines,
You at the village feast are oft decreed
To modest maidens as the dearest meed;
To God himself with grateful hearts we bring
The earliest incense of the breathing spring,
And on his altar throw your blushing spoils,
While, with your chaplet crown'd, religion smiles."

As well as our present white-flowered Epigæa repens, a red-flowered variety was published in Sweet's Flower Garden, in 1837, but which, it may be feared, has been lost to the country. It is even a prettier plant than the present subject. The treatment of each will be the same; that is, they should have a rather shaded and sheltered situation, be planted in sandy peat, and have their trailing stems pegged down, as they advance in growth, to prevent their being blown about and injured. This treatment affords also another advantage, some of the branches will strike root, and may ultimately be separated for increase. In severe frost a mat thrown over it would prevent injury from the alternation of freezing and thawing.

ACAN'THUS MOL'LIS.

SOFT ACANTHUS.

Class.
DIDYNAMIA.

Order.
ANGIOSPERMIA.

Natural Order.
ACANTHACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Italy.	3 feet.	July to Sep.	Perennial.	in 1548.

No. 920.

The generic name, Acanthus, is derived from the Greek, and signifies a spine: this characterizes some of the species. The Acanthus mollis was known to our old English botanists; and, by them propagated from imported seeds, whence probably arose the variation in different individuals of the species; some being much more spiny than others, although in all the varieties, unlike the spinosa, the spines are inoffensive.

Of this plant mention may be found in the old pharmacopœas, under the name of Brank-ursine, both its leaves and roots having been employed medicinally, possessing much the same qualities as Marsh-mallow; that is, emollient and demulcent.

Some authors have given to this plant the memorable distinction of having originated the Corinthian Order of architecture. See No. 508.

The Acanthus mollis is best suited to a situation in front of the shrubbery, where herbaceous plants are admitted. It should remain undisturbed for several years, when it will throw up strong undivided stems of flowers, from three to four feet high, of showy character.

Antirrhinum quadricolor. 3/4

Dianthus plumarius. 3/4

Calandrinia speciosa. 3/4

Gentiana incarnata. 3/4

Miss Maund del. 231 Watts sculp.

ANTIRRHI'NUM QUAD'RICOLOR.

FOUR-COLOURED SNAPDRAGON.

Class. DIDYNAMIA. *Order.* ANGIOSPERMIA.

Natural Order. SCROPHULARIACEÆ.

Native of	Height	Flowers in	Duration	Introduced
S. Europe.	18 inches.	July, Aug.	Perennial.	in 1843.

No. 921.

From the Greek words ANTI, RHIN, signifying like, and a nose, is deduced the name Antirrhinum; in allusion to the snout-like flowers of the genus.

This new and very showy Snapdragon will be a valuable accession to our borders. Its spike of flowers is dense and conspicuous,—its colours mingling together in pleasing harmony.

The Antirrhinums and Linarias, which were formerly included in one genus, have long been favourites, from the Cymbalaria (No. 300) which creeps on the sides of the wall, to the showy Majus (No. 279) that erects itself boldly on its summit.

The Antirrhinum quadricolor may be propagated readily by cuttings; which strike more readily if planted on a hotbed; or in pots, and placed within a cucumber frame. When the cuttings begin to grow, which is evidence of their having struck root, they should be potted singly, in sandy compost, and have winter protection in a cold frame, or in a dwellinghouse. If turned into the borders, in May, they will soon become luxuriant and showy.

DIAN'THUS PLUMA'RIUS.

FEATHERED PINK. Wild Variety.

Class. DECANDRIA. *Order.* DIGYNIA.

Natural Order. SILENACEÆ.

Native of Britain.	Height. 1 foot.	Flowers in June to Aug.	Duration Perennial.	Inhabits old walls.

No. 922.

Dianthus or "Jove's Flower," see No. 65.

We here figure what may be pretty confidently stated to be the parent of our beautiful garden pink; long the puzzle of British botanists. Both it and the Carnation having, with doubts, been attributed to the same origin—the wild Dianthus caryophyllus, found on old castles and walls. This idea was, in some degree, correct; but not satisfactorily so. Sir James Smith, in Rees's Cyclopædia, says of the Pink, it is "Most assuredly a distinct species, though botanists have not ventured to define it." Dr. Lindley, in the Penny Cyclopædia, says the wild Dianthus caryophyllus is, "In its cultivated state, the parent of the Carnation, Picotee, and Pink." Hudson, in his Flora Anglica, of 1778, attributed the origin of the Carnation to its commonly-received parent,—the wild Dianthus caryophyllus; the Pink to his Dianthus arenarius, a plant which Sir James Smith, in his English Flora, includes as a variety of caryophyllus, but says, this "May perhaps be Mr. Doody's 'hairy species, frequent in Kent,' noticed by Dillenius in Ray's Synopsis; and the subject is worth notice."

The question involved in these hints is now, it may be presumed, satisfactorily explained; for which botanists are indebted to A. W. Leighton, Esq., in whose "Flora of Shropshire" it is shown that the plants, hitherto called D. caryophyllus, comprise two distinct species—the one the parent of the Carnation, the other the parent of the Pink.

Our drawing was taken from a cultivated plant, originally obtained from Ludlow Castle; and we have now before us a specimen with which we have been favoured by our esteemed friend, the Rev. John Price Alcock, Minor Canon of Rochester Cathedral, which he gathered from the old city wall, of Rochester. This is the real caryophyllus, and differs from the Ludlow Castle plant in the leaves being finely serrulate at their base only; whereas, those of the Ludlow Castle plant, from which our drawing was made, are finely serrulate throughout their whole length. The flowers too, as will be seen by our figure, which is, we believe, the first published of this native plant, in its original purity, have the outer edge of their petals deeply laciniated; whilst those of the carophyllus are only sharply toothed. They have too, says Mr. Cameron, a different period of flowering. That of the Dianthus plumarius being June; that of caryophyllus July and August. In this particular the first agrees with the Pink, the latter with the Carnation.

The native localities of these plants are numerous; and Mr. Leighton thinks it probable that those of Kent only belong to caryophyllus; all others to plumarius. English botanists will now, we hope, soon determine this point.

CALANDRI'NIA SPECIO'SA.

SHOWY CALANDRINIA.

Class.
DODECANDRIA.

Order.
MONOGYNIA.

Natural Order.
PORTULACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
California.	4 inches.	May, to Oct.	Annual.	in 1831.

No. 923.

Calandrini was the name of a continental botanist. This is the Calandrinia speciosa of Lindley. Our previously published species being his grandiflora.

This is a genus of tender American plants, some of which, although of perennial character, serve to ornament our borders as annuals. The present is, however, strictly annual, but will not offend, as do many annuals, by its too abundant herbage. Its leaves are few, and its branches inconspicuous; it has, however, pretty showy flowers, bright and gay in the sun, to cheer its loneliness.

There's not a plant, however rude,
  But hath some little flower,
To brighten up its solitude,
  And scent the evening hour.

There's not a heart, however cast
  By grief and sorrow down,
But hath some memory of the past,
  To love and call its own.

The Calandrinia speciosa may be sown either on a hotbed and transplanted, or on the borders; but, if the latter, the seeds should not be sown earlier than the end of April or beginning of May.

GENTIA'NA INCARNA'TA.

FLESH-COLOURED GENTIAN.

Class. PENTANDRIA. *Order.* DIGYNIA.

Natural Order. GENTIANACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
N. America	2 feet.	October.	Perennial.	in 1812.

No. 924.

This genus, Gentiana, was named after the King of Illyria, a country bordering on the Adriatic Sea.

Gentiana being an extensive genus, has, by some continental authors, been divided into several others; but their distinctions are not satisfactory. Our plant is the Pneumonanthe incarnata of these writers. It is not very generally met with in cultivation, on account of its being slow of increase. It is impatient of too much management; we mean, disturbance. It loves a home in peat and loam, where from year to year it may rest in quietude; and like the plodding economist, content in his own narrow sphere; adds, imperceptably, to his little stock, nor seeks a fortune by railway speed.

The whole of the Order Gentianaceæ is remarkable for the uniform bitterness of all the plants which it comprises. Gentiana lutea, the well-known bitter of our shops, is perhaps the most prominent example. Dr. Paris, in his Pharmacologia observes that bitter extractive seems to be as essential to the digestion of herbivorous, as salt is to that of carnivorous animals. No cattle will thrive upon grasses which do not contain a portion of this

vegetable principle; this fact was proved by the researches of the late Mr Sinclair, gardener to the Duke of Bedford. They shew, that if sheep are fed on yellow turnips, which contain little or no bitter principle, they instinctively seek for, and greedily devour any provender which may contain it, and that if they cannot obtain it they become diseased and die. Animals that feed in marshy lands, on food containing but little nourishment, are best defended from the diseases they are liable to contract in such situations by the ingestion of bitter plants. Upon these occasions nature is very kind, for the particular situation that engenders endemic diseases is generally congenial to the growth of the plants that operate as antidotes to them. Thus it has been found that the Menyanthes trifoliata, (Water Trefoil,) which on account of its bitterness has been used as a substitute for hops, is a cure for the rot in sheep, when given in doses of a drachm of the powdered leaves. Well may David say, in reference to the universal care of an all-merciful Creator, "He giveth to the beast his food."

We are ourselves conscious of the invigorating effects of slight bitters upon our stomach; and their presence in malt liquors not only tends to diminish the noxious effects of such potations, by counteracting the indirect debility which they are liable to occasion, but even to render them, taken in moderation, promoters of digestion. The Swiss peasant cheers himself amidst the frigid solitude of his glaciers, with a spirit distilled from Gentian, the extreme bitterness of which is relished with a glee that is quite unintelligible to a more cultivated taste.

Rosa Gallica. 1/3

Ononis natrix. 1/4

Veratrum nigrum. 1/3

Lonicera sempervirens. 1/4

Mille del. 232 Watts, sculp.

RO'SA GAL'LICA.

FRENCH ROSE.

Variety; Queen of Summer.

Class. ICOSANDRIA. *Order.* POLYGYNIA.

Natural Order. ROSACEÆ.

Hybrid Origin.	Height. 6 feet.	Flowers in July & Aug.	Habit. Shrub.	Cultivated in 1596.

No. 925.

The meaning of the word Rosa has been noticed under No. 177.

Shakspere made his hero say "Richard is himself again." The Rose, in a similar spirit, may now assert its preeminence. Society not only acknowledges it to be the queen of the garden, but is about to assign to it the honour due to its superior qualities. The Rose which we now figure —the Queen of Summer, is a variety of the Rosa Gallica, or French Rose, but borrowing, probably a little of its variation from some other species; great variation has, however, been displayed among true seedlings of the French Rose, immense numbers of which have been propagated by our continental neighbours, and sent to nurserymen and private gardens in England.

It is a variety of this Rose that is used medicinally for conserves and infusions, being chosen on account of its greater astringency. The Rosa centifolia is, however, preferable for distilled water, from its superior fragrance.

The Rosa Gallica, from the regular formation of its flowers, possesses fine qualities for exhibitors,

and now that florists are paying increased attention to the exhibition of Roses, it will, with its innumerable hybrids, hold a high place in their estimation. Several curious and pretty Roses belonging to this species have been introduced — some of which are mottled, spotted, striped, &c, of which we shall in due time publish figures. This species grows and flowers well, either on its own roots, or budded on standards. As the latter are now so much preferred, we shall here give some hints on the stocks intended for standards.

The wild briar, or Dog Rose, of our woods and hedges, is generally chosen and collected in winter for standards, to bud upon, from its hardy nature; it is, however, questionable whether it be the best, for many of the French stocks, it must have been observed, are of more kindly growth, and increase much more in their thickness and consequent strength than our Wild Rose. As our hedges possess several distinct species, some, it is more than probable, are superior to others; these, however, are not yet clearly distinguished by nurserymen or amateurs, but the subject is worthy of attention, and should be tested by raising stocks from the seeds of the different species. The Boursalt Rose is known by practical men to be superior to our own Wild Rose for Stocks; and that variety distinguished as the Rose de Lisle is considered the best. Stocks from this may be readily obtained by first cutting down the stems in winter to the ground, and, if the stool be strong, shoots will be produced by July fit for layering. We shall, ere long, continue this subject.

ONO'NIS NA'TRIX.

GOAT-ROOT REST-HARROW.

Class. MONADELPHIA. *Order.* DECANDRIA.

Natural Order. LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration	Introduced
S. Europe.	18 inches.	May, to Oct.	Perennial.	in 1683.

No. 926.

The ancient Greeks, not unfrequently, displayed some rather odd fancies in the choice of their names of plants; and which seem occasionally to be mixed with humour. They sometimes used antiphrasis or irony, naming that as sweet which was bitter; or that good, which was the contrary. The ass, their favourite animal, they often refer to, as in the present name Ononis, which implies that asses delight in the plant; we have also Onosma, indicating that asses are pleased with its smell; Onobrychys tells that asses gnaw the plant; and Onobroma, that it is their grateful food. We have also, names from the Greeks, signifying wolf's face, ape's face, pig's snout, &c,

The Ononis natrix was one of the standard greenhouse plants of the last century; but in pots it has rarely been seen to present half the beauty which it displays when planted out in the open ground. Here it flourishes, and flowers so freely, as to be quite worth the trouble of striking cuttings in summer, and giving them winter protection in a cold frame, or sitting room; so that they may be in readiness to transfer to the borders in May.

VERA'TRUM NI'GRUM.

DARK-FLOWERED VERATRUM.

Class. POLYGAMIA. *Order.* MONŒCIA.

Natural Order. MELANTHACEÆ.

Native of Siberia.	Height 5 feet.	Flowers in July.	Duration Perennial.	Cultivated in 1596.

No. 927.

Veratrum, says Sir J. E. Smith, which some derive from verè atrum, truly black, because the root is, externally at least, of that colour, may more safely be left amongst those ancient names whose origin is unknown. It occurs in Lucretius and Pliny, indicating some very active or poisonous plant; and is generally supposed synonymous with the HELLEBOROS LEUKOS of Dioscorides, itself rather doubtful, and whose particular designation is a contradiction to the above etymology. Whatever difficulties may attend the determination of the ancient Veratrum, this name is now universally applied to the present genus.

There is not, we think, in spring, any hardy plant in our gardens, which produces a display of foliage so exceedingly handsome as the Veratrum nigrum. Its root leaves spring up of a delicate green colour, and gradually expand their manifold doublings; for, as Gerard says, they are "folded into pleats like a garment pleated to bee laied vp in a chest." Its erect stems of flowers, too, although of sombre hue, are sure to catch the eye of the casual visitor. Snails also, do not fail to find out the

plant, and frequently lodge at the bottoms of its leaves, whence they should be removed, or they will soon destroy their beauty.

Could snails and other consumers of this plant but consult "Henry Lyte, Esquyer's Newe Herball" (1578), they would scarcely dare to molest the Veratrum; for amongst his warnings against its effects, he says, — "Taken out of time and place, or to muche in quantitie, is very hurtfull to the body: for it choketh and troubleth all the inward partes, draweth togyther and shrinketh al the sinewes of mans body, and in time fleaeth the partie. Therfore it ought not to be taken vnprepared, neyther then without good heede and great aduisement. For such people as be either to yong or to old, or feeble, or spit blood, or be greeued in their stomackes, whose breastes are straight and narrowe, and their neckes long, suche feeble people may by no meanes deale with it, without ieobardie and danger. Wherfore these landleapers, Roges, and ignorant Asses, which take upō them without learning and practise, do very euill, for they give it without discretion to al people, whether they be young or olde, strong or feeble, and sometimes they kil their patientes, or at the least they put them in perill or great daunger of their lyues.' The work of Lyte, from which we have here quoted, is a translation of the Pemptades of Dodonæus, a curiosity in its way.

This plant flourishes in any common garden soil, and the only advice necessary to be given, is that it be not frequently disturbed, nor much divided.

LONI'CERA SEMPERVI'RENS.

EVERGREEN OR TRUMPET HONEYSUCKLE.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. CAPRIFOLIACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
Uncertain.	12 feet.	August.	Shrub.	in 1836.

No. 928.

This genus was named after Adam Lonicer. See No. 23.

The plant which our drawing represents was received into the Liverpool Botanic Garden, as we are informed by Mr. Shepherd, the curator, from the establishment of the Messrs. Booth of Hamburgh, as a double variety of the Trumpet Honeysuckle, but it proved single only; it is, however, distinct from that usually met with amongst us; its flowers being larger, and it proves altogether a desirable addition to our twining shrubs. Although the Lonicera sempervirens is not, strictly speaking, an evergreen, it so nearly approaches it as to acquire additional value from this quality; a quality which, by the bye, must compensate for a deficiency of the perfume met with in our own wild species, and so forcibly alluded to by the poet.

> "The woodbines mix in amorous play,
> And breathe their fragrant lives away."

This variety of Lonicera is perfectly hardy, still a wall should be chosen for training it against. Strong cuttings of the preceding year's shoots, planted in spring, will quickly make root and grow.

Chrysanthemum Sinense. 2/2

Andromeda speciosa. 2/2

Rhododendron ennanandria. 2/2

Pinus resinosa. 2/2

CHRYSAN'THEMUM SINEN'SE.

CHINESE CHRYSANTHEMUM.

Var. Ernestine.

Class.
SYNGENESIA.

Order.
SUPERFLUA.

Natural Order.
COMPOSITÆ.

Native of China.	Height 3 feet.	Flowers in November.	Duration Perennial.	Introduced in 1842.

No. 929.

Chrysanthemum, Golden flower. See No. 353.

Chinese Chrysanthemums, like many others of our floral beauties, are fast advancing in the perfection of their flowers. In colour, in symmetry, and size, they improve; and the new varieties, lately raised in milder climates than our own, have attracted general attention. The variety now figured, called Ernestine, was obligingly sent to us by John Twamley, Esq., of Warwick, who obtained it from Mr. May, of Hope Nursery, Leeming Lane, near Bedale, Yorkshire. In a letter from Mr. May, he says "I received it, in a collection of fifty select sorts, from France, which were said to be seedlings raised in the south of Spain. They were all new, in either form or colour, and some of them very splendid."

Much, very much, of the beauty of the Chrysanthemum depends on culture. Cuttings struck in April, or early in May, produce the finest plants. They should receive progressive pottings, in rich light compost; be supplied with liquid manure; have plenty of air; and house protection before any occurrence of frost.

ANDROM'EDA SPECIO'SA.

SHOWY ANDROMEDA.

Class. DECANDRIA. *Order.* MONOGYNIA.

Natural Order. ERICACEÆ.

Native of	Height.	Flowers	Habit	Introduced
Carolina.	3 feet.	June to Sep.	Shrub.	in 1800.

No. 930.

The fabled Andromeda — bound to a rock to be destroyed, will be well remembered by most of our readers. To Linneus's poetical ideas, on adopting the name for this genus, we alluded under No. 240. It may not, however, be amiss, as a specimen of the vivid fancy of this great naturalist, to give Sir J. E. Smith's translation of Linneus's explanation, as found in his "Lachesis Lapponica." He says, "Andromeda polifolia (this is the species on which the genus was founded) was in its highest beauty, decorating the marshy grounds in a most agreeable manner. The flowers are quite blood-red before they expand; but, when full-grown, the corolla is of a flesh-colour. Scarcely any painter's art can so happily imitate the beauty of a fine female complexion; still less could any artificial colour upon the face itself bear a comparison with this lovely blossom. As I contemplated it, I could not help thinking of Andromeda, as described by the poets; and the more I meditated upon their descriptions, the more applicable they seemed to the little plant before me; so that, if these writers had it in view, they could scarcely have contrived a

more apposite fable. Andromeda is represented by them as a virgin of most exquisite and unrivalled charms; but these charms remain in perfection only so long as she retains her virgin purity, which is also applicable to the plant now preparing to celebrate its nuptials. This plant is always fixed on some little turfy hillock, in the midst of the swamps, as Andromeda herself was chained to a rock in the sea, which bathed her feet, as the fresh water does the roots of this plant. Dragons and venomous serpents surround her, as toads and other reptiles frequent the abode of her vegetable resembler, and, when they pair in the spring, throw mud and dirt over its leaves and branches. As the distressed virgin cast down her blushing face, through excessive affliction, so does this rosy-coloured flower hang its head, growing paler and paler till it withers away. Hence, as this plant forms a new genus, I have chosen for it the name of Andromeda." Linneus subsequently extended the analogy. "At length comes Perseus, in the shape of summer, dries up the surrounding water, and destroys the monsters, rendering the damsel a fruitful mother, who then carries her head (the capsule) erect."

Andromeda speciosa is an exceedingly handsome species, and of which there are several varieties, each varying more or less in their foliage and flowers, but in no important degree; that called pulverulenta may be esteemed the best.

It should be grown in sandy peat, not less than eighteen inches deep; where it will flourish and flower, regardless of late frosts.

RHODODEND'RON ENNEAN'DRIUM.

HYBRID RHODODENDRON.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of	Height.	Flowers in	Habit.	Raised.
Mexico.	3 feet.	June.	Shrub.	Uncertain.

No. 931.

Rhododendron, compounded of RHODON, DENDRON, a rose or beautiful flower; and a tree. The Greek word RHODON, in the sense of a beautiful flower, is well deserved by this splendid genus of shrubs.

This is a beautiful and free-flowering plant, partaking more of the character of Azalea than Rhododendron; and with an anomalous number of stamens, as if it had been exalted from amongst the Azaleas, which have five stamens, but had not quite reached the character of Rhododendron with ten stamens.

It is a hybrid, raised, we believe, by the very Rev. the Dean of Manchester, some years ago, at Spofforth; and is nearly related to another of his seedlings, called hybridum, in the Bot. Reg. 195.

Its flowers have a somewhat pleasant fragrance, and the plant is quite hardy, but it rarely ripens seeds. It may be easily propagated by layering, a mode of increase but little resorted to by amateurs, although so simple. It requires only that the branches be pegged beneath the soil, in spring, leaving only the points of the shoots above ground.

PI'NUS RESINO'SA.

THE RED PINE.

Class. MONŒCIA. *Order.* MONADELPHIA.

Natural Order. PINACEÆ.

Native of N.America.	Height. 50 feet.	Flowers in April.	Habit Tree.	Introduced in 1756.

No. 932.

The ingenuity of modern authors has found for the word Pinus, a derivation in both the Greek and Celtic languages; viz. From the Greek word PION, signifying fat, in allusion to the pitch and tar produced by trees of this genus; and from the Celtic PIN or PYN, which means a mountain or rock, and well indicates the habitation of the trees. The latter derivation is probably correct.

The natural order, CONIFERÆ, contains all our pine and fir trees. These have unisexual flowers; that is, they produce two sorts of Amentum, or Catkin, each containing only the flowers of one sex. These are usually on one tree, but in some species the male and female Catkins are on different trees. The Catkin, which becomes productive of seeds, hardens, is sometimes woody, and is then, in its matured state, called a strobile, or cone. The seeds of many species are furnished with a membranous wing, so that when the sunny gleams of spring stretch wide their prison doors, the mountain breeze invites them forth, and bears them away to fulfil the duties of their nature. They sail afar off, to colonize some rocky summit, where

first the lichen, the birch, and the willow, have spread for ages their worn out vestments, to fertilize a spot for their reception.

These trees, excepting the Larch, are almost all evergreen, and of the Pine, the leaves are needle-shaped, and produced in groups of two, three, or five, from a scaly sheath. Some species grow to immense height,—exceeding two hundred feet; and unlike other trees, they prune themselves, by what may be termed starving their lower branches. The northern parts of Europe seem to possess inexhaustible forests of pines and firs; but still those of America, exceed all others in the world, both for extent, and the stature of the gigantic trees which they contain.

We have given this general glance over the Coniferæ, introductory to figuring some of the most interesting of the species, feeling assured that our readers will be pleased by a closer acquaintance with these aboriginal tenants of the wild forest, which are now obtaining so much attention.

The Pinus resinosa is a hardy North American tree, with red bark; very ornamental, either singly, or in a coniferous collection, now usually called a pinetum. It ripens seeds, from which it may be propagated; but it is unworthy of culture in this country as a timber tree, although in America it rises eighty feet high. The finest trees of Resinosa are at White Knights; they are about fifty years old, and twenty-five feet high; whilst others in the Hackney nursery, of the same age, are only about five feet high. Like a great portion of the genus it thrives best in a deep light sandy soil.

Azalia viscosa. 2/1

Potentilla formosa. 2/3

Fuchia macrostemon. 2/3

Trillium erythrocarpum. 2/3

Hille del. 234 Wenz. sculp.

AZA'LEA VISCO'SA.

Variety Canescens.

CANESCENT AZALEA.

Class. PENTANDRIA. *Order.* MONOGYNIA.

Natural Order. RHODORACEÆ.

Hybrid Origin.	Height. 4 feet.	Flowers in August.	Habit Shrub.	Cultivated in 1835.

No. 933.

The Greek AZALEOS, dry or arid, alludes to the habitat of the plant to which the name was first given. Azalea viscosa includes several very distinct varieties. From one or other of these, upwards of one hundred named varieties have originated. At Highclere, the seat of Lord Carnarvon, the variety known as Rubescens was crossed with Azalea pontica, and a numerous progeny of much beauty obtained, varying in their characters between the two species.

It will be recollected that the Azaleas and Rhododendrons are, by most authors, accounted as one genus, under the name Azalea; and there are reasonable grounds for their amalgamation. The only difficulty emanating from their separation, is that of determining to which genus the numerous hybrids that have been, and still will be, propagated between the two, should be attached. The beauty and variety of these afford abundant encouragement for perseverance in adding to the stock.

Some of our readers may be unacquainted with the method of fertilizing different species of plants, so as to obtain seedlings partaking of the character

of any two. We will concisely explain it. It should be remembered that plants must be nearly related to each other; that is, of the same genus. For instance, one Fuchsia may be mixed with another Fuchsia; but a Fuchsia cannot be mixed with a Geranium. Some deviations from this apparent law of nature have occurred, but these are not at present worth mentioning.

Fertilization is effected simply by conveying the pollen (that fine powder which may be shaken off the anthers) of one flower to the stigma of another. Success, however, is rendered more certain by first cutting out the anthers of the flower from which seed is desired, before any of their own pollen has been scattered. As some flowers discharge it before they expand, they should be opened before they would do so naturally, for the purpose of thus taking out the anthers, and at the same time, or on the morrow, the pollen of the other flower experimented on, should be applied. The pollen may be conveyed by picking a flower, or collecting it on a camel's-hair pencil, for the purpose of applying it to the stigma, which is the glutinous termination of the style. In the Azalea and Rhododendron the style will be readily distinguished, there being but one in each flower; which must not be injured, where it is required to produce seed. To be still more particular, and to prevent bees from carrying other pollen to the fertilized flower, a piece of muslin should be tied over it, or those little intruders may thwart the best conducted manipulations. The flower should be marked, and the seed preserved for sowing.

POTENTIL'LA FORMO'SA.

Var. Garnieriana.

MISS GARNIER'S CINQUEFOIL.

Class. ICOSANDRIA. *Order.* POLYGYNIA.

Natural Order. ROSACEÆ.

Hybrid Origin.	Height. 2 feet.	Flowers in June Sept.	Duration. Perennial.	Cultivated in 1838.

No. 934.

Potentilla, little power, alludes to the medicinal properties of the plant.

Several varieties of Potentilla, bearing the names of their respective originators, have been introduced to our gardens, each of them possessing some new claims to admiration. In 1831, we ourselves raised about two hundred plants, from Potentilla seeds carefully fertilized, one only of which possessed any claim to notice. We mention this that amateurs may not feel unnecessary disappointment when their exertions happen to have been fruitless. The one variety thus raised was published under No. 385, and was remarkably distinct, both from its parents and any known species; but proved to be of such delicate habit that its increase to any extent has been almost despaired of by the friends to whom it was given.

Miss Garnier's Potentilla is a gay and pretty variety; and as it is perfectly hardy, and admits of easy increase, it is very desirable for the flower borders. Like most of the established species, the roots of this variety should be divided in the spring or autumn, when increase is desired.

FU'CHSIA MACROSTE'MON.

Variety Discolor.

LONG-STAMENED FUCHSIA.

Class. OCTANDRIA. *Order.* MONOGYNIA.

Natural Order. ONAGRACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Falkld. Islnds.	3 feet.	July & Aug.	Perennial.	in 1830.

No. 935.

Fuchsia is named after Leonard Fuchsius, a German physician and botanist of the 16th century.

Fuchsius was an eminent man in his day, worthy of the splendid genus of plants which his name represents. He was Professor of Medicine at Ingoldstadt, where he practised with great success, and published several medical and botanical works. This was at a period when there existed much religious excitement in Germany, and Fuchsius, having attached himself to the Lutheran party, experienced inconvenience, and even some persecution—the fate of all warm-hearted men, who zealously advocate any religious opinions, however righteous, reasonable, or unobtrusive on the belief of others, they may happen to be. Fuchsius, subsequently, from the entreaties of the Duke of Wirtemburg, settled at the university of Tubingen, where he long resided, universally respected, as an eminent scholar, physician, and exemplary advocate of the new faith of that period. The Historia Plantarum of Fuchsius, published at Bazil, in 1542, has often been referred to as possessing the best wood cuts of that period. We have given this

slight biographical sketch that our readers may not be wholly uninformed of the character of that person whose name distinguishes one of the most splendid genera of plants that adorns our gardens.

It has appeared to be desirable that the present species of Fuchsia should be more generally known; not from the size of its flowers, for these are far inferior to many of the new varieties which have lately been raised, but from the advantages that are presented to the cultivator from its hardy character. Planted out, even in an exposed situation, it bears our winters, exceedingly well, as a deciduous shrub. It is the hardiest known plant of the whole genus, and consequently a species that may be employed advantageously for infusing so desirable a character into hybrid varieties.

When first introduced, this plant was cultivated in the greenhouse, and from the few flowers it produced, disappointed the hopes of its possessors; planted in the borders, however, it proved to be a most abundant flowerer during the latter part of the summer, after which it becomes covered by its large black berries.

These properties, combined with its compact habit of growth, and its hardiness, make it desirable, even amongst those species whose flowers are double the size. It was imported from the Falkland Islands, and is a mere variety of the established species—macrostemon. Conica, globosa, grandis, and some others of the older sorts, are also varieties; which every one will have been convinced of who has raised seedlings from it, such is their variable and opposite character.

TRIL'LIUM ERYTHROCAR'PUM.

RED-FRUITED TRILLIUM.

Class. HEXANDRIA. *Order.* TRIGYNIA.

Natural Order. MELANTHACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
N. America.	4 inches.	May, June.	Perennial.	in 1811.

No. 936.

The name of this genus, has, very aptly, been founded on the number of several parts of the plant. Although left unexplained by Linneus himself, it evidently alludes, like Trilix, to the treble number, not only of the calyx-leaves and petals, but of the stigmas, cells of the fruit, and even of the leaves, which prevails throughout this genus. The specific name, erythrocarpum, is compounded of the Greek words, ERYTHROS, KARPOS, red fruit. The species has, sometimes, been called pictum, after Pursh, who described it in his Flora Americana.

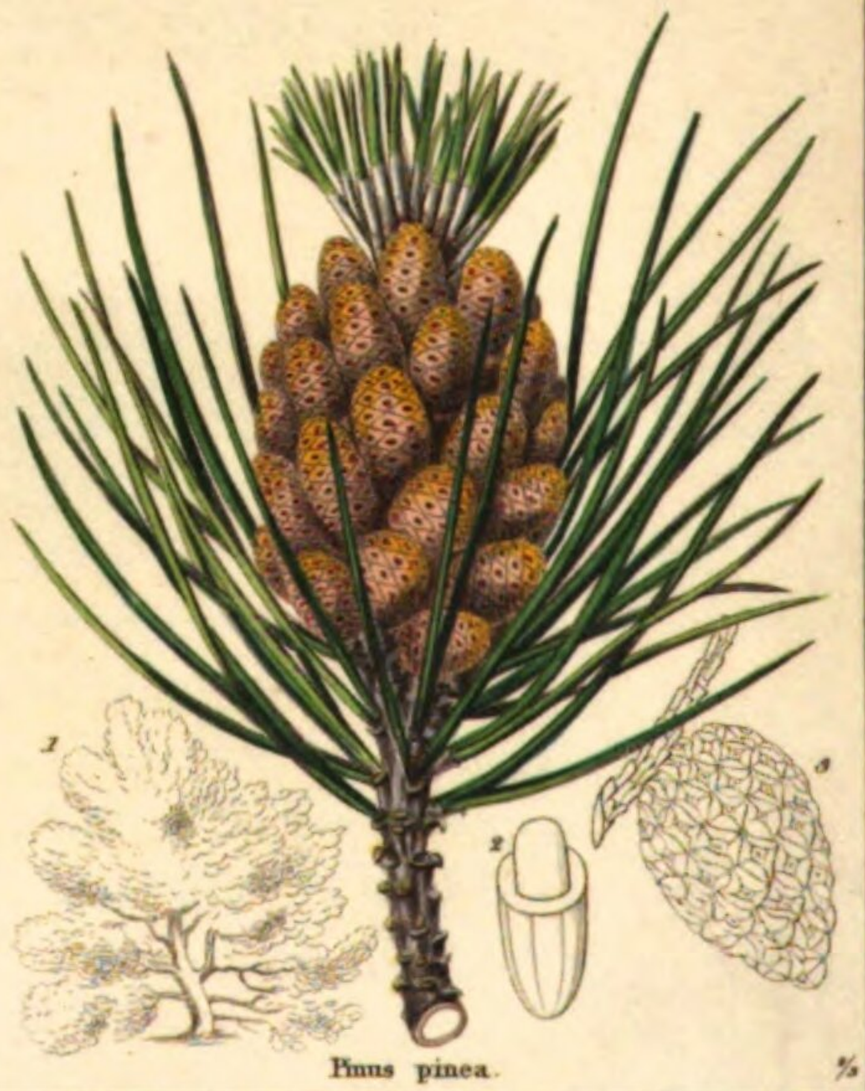
Trillium erythrocarpum, is a delightful little plant, and its rarity enhances its value in the estimation of those who do, and those who do not, possess it. The whole genus is American, and very few cultivators have paid that attention to the various species which they deserve, considering that most of them may be cultivated as hardy plants.

There is scarcely a species but requires to be planted in sandy peat, in a shady situation; but they demand different degrees of moisture; this requiring to be kept very moist in summer, being a native of sphagnum bogs.

Aquilegia Skinneri. 3/4

Lactuca sonchifolia.

Funkia subcordata. 3/4



Pinus pinea. 3/5

AQUILE'GIA SKINNE'RI.

SKINNER'S COLUMBINE.

Class.
POLYANDRIA.

Order.
PENTAGYNIA.

Natural Order.
RANUNCULACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Portugal.	3 feet.	June, July.	Perennial.	in 1839.

No. 937.

The petals of some of the Aquilegias, when separated from each other, have the form of a bird, whence the names Aquilegia and Columbine have been deduced, from aquila, an eagle; and columba, a dove. Mr. Skinner, whose name is coupled with this species, was a botanical collector, in Gautemala, from which country he sent seeds of the plant to His Grace the Duke of Bedford, at Woburn Abbey.

This is one of the most beautiful Aquilegias yet introduced to this country, and as it survived the severe winter of 1840—41 in the open borders, its hardy habit is not doubtful. Its spur, when finely grown, is nearly two inches long, a size which surpasses those of the flowers of any other species of the genus.

The Aquilegia Skinneri is yet a scarce treasure; and those who possess it should pot a plant in peat and loam, and give it cold frame protection, to guard against the possibility of losing it. As it may be raised from seeds there is no doubt of its becoming, ere long, an ornament in every good garden.

LACTU'CA SONCHIFO'LIA.

SOWTHISTLE-LEAVED LETTUCE.

Class. SYNGENESIA. *Order.* ÆQUALIS.

Natural Order. COMPOSITÆ.

Native of	Height.	Flowers in	Duration	Introduced
S. Europe.	2 feet.	July, Aug.	Perennial.	in 1822.

No. 938.

Lactuca, a name which was founded on the Latin word lac, milk; the application of which to the present genus there is no difficulty of determining. The prevalence of milky juices in the Lettuce family is known to every one. These juices are somewhat diuretic and narcotic.

For the Lactuca sonchifolia, and numerous other choice novelties, we owe an unrequitable debt of gratitude to Miss C. Balguy, of Hazle Brow, near Derby, who received it from Her Grace the Marchioness of Hastings. Although this flower glories not in an exceedingly gay colour, but in a tint partaking rather of the softened hue which might be preferred by the modest taste of the society of friends, still it produces much beauty, we may say gaiety, from its habit of growth. Our plant at this moment displays nearly two hundred fully expanded flowers, without the intervention of a leaf, to lessen their effect; indeed, so careful does the plant appear to be that the beauty of a flower should not be intruded on, that even its younger buds are not permitted to erect their heads, lest they become intrusive amongst the full-dressed sisterhood.

Although the Lactuca sonchifolia has been known for some years to English botanists, it seems to owe its more general distribution to Her Grace the Marchioness of Hastings, who ranks with the most active of Flora's noble patronesses. Her Ladyship has obligingly informed us, that being attracted by the peculiar colour of the flowers as they blossomed in the Tyrol, she collected seeds, and brought them to England. They grew, says her Ladyship, in rocky coarse soil, on the banks of the river Inn, near Inspruck.

This plant proves completely hardy, and by being left undisturbed to become strong, produces, as we have stated, an abundance of flowers. Its roots may be divided in spring, when increase is desired; or it may be raised from seeds, which it ripens in dry weather, although with us not abundantly. These should be kept till spring, when they may be sowed in a pot, and be forwarded by being planted in a hotbed. Some care is required with these, as with most other seedling plants so raised, in preparing them for full exposure to the open air. Thousands of plants are annually destroyed by their sudden transition from the warm moist atmosphere of a hotbed, to the dry cold winds that not unfrequently occur in spring. Sudden changes are not less uncongenial to vegetable than animal life. When plants of any sort, but more particularly seedlings, are to be transferred from the hotbed to the borders, it should be effected by degrees, by first removing them into a cold frame, and here gradually, through the space of a week at least, inuring them to full exposure.

FUN'KIA SUBCORDA'TA.

SUB-CORDATE-LEAVED FUNKIA.

Class.
HEXANDRIA.

Order.
MONOGYNIA.

Natural Order.
LILIACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Japan.	1 foot.	Aug. Sept.	Biennial.	in 1790.

No. 939.

The genus Funkia (formerly included in Hemerocallis) was established by Sprengel, and named in honour of a German botanist. This species was formerly known as Japonica, and the name being once established no legitimate reason appears for its change, although subcordata, which points to a distinguishing character, may be a better one.

The Funkia subcordata, like its near ally, ovata, published under No. 596, was, long after its introduction to this country, nursed as a greenhouse plant; and although it is quite hardy, and is never injured by our winters, it is also evident that our climate does not always afford it such congenial encouragement as is desirable, and the consequence is that in some seasons it does not flower. To ensure its flowering regularly it should be planted in a light dry soil, and remain undisturbed for several years, which will secure a produce of its handsome blossoms.

Those who possess a greenhouse would be amply repaid by its handsome flowers, for the trouble of potting and protecting a plant. Its roots may be divided in the spring for increase.

PI'NUS PI'NEA.

STONE PINE.

Class.
MONŒCIA.

Order.
MONADELPHIA.

Natural Order.
PINACEÆ.

Native of S. Europe	Height. 50 feet.	Flowers in June, July.	Habit Tree.	Introduced in 1548.

No. 940.

The derivation of the term Pinus has been noticed under No. 932. It is not uncommon for all species of Pinus, Abies, and Larix, to be called Fir Trees. They have, however, for many years, been distinguished from each other by botanists; it would therefore, be far better that those who advocate the use of common names only, should apply to these trees their recognised distinctions. Inasmuch as it is the characteristic of knowledge to call things by their proper names, so must it be a mark of ignorance not clearly to distinguish palpable differences, and consequently to huddle incongruous objects together under one common title. We will point out these differences, that the readers of our humble production may not undesignedly offend against the progress of knowledge.

Pinus (the Pine) always has its leaves in groups, usually in pairs, and its cones generally are conical, and their scales thickened at the tip.

Abies (the Fir) always has its leaves growing singly, and its cones are usually rather cylindrical than conical, and pendent; and their scales not thickened at the tip.

Larix (the Larch) always has its leaves in considerable bundles, and they are deciduous.

These characters are sufficient to guide the common observer, but if the distinction be thought unimportant, because all the species belong to the same natural order—Pinaceæ, it may be replied that no one would think of calling the Strawberry or the Potentilla a Rose, yet these belong to the the same natural order—Rosaceæ.

In our figure of Pinus resinosa, lately published, we gave the fruitful catkin, or young cone; showing, in a miniature figure, the grouped male catkins. In our present plate, we have made the male catkins of this diœcious tree, the chief figure, giving an outline of the young cone. Miniature figures also are given in each case of the trees as they are now growing in the pinetum of the Birmingham Horticultural Society; where Resinosa and Pinea are about fourteen years old, and ten feet high. The Stone Pine is branched to the ground, and in this country it rarely assumes any other form, but still is very ornamental. In the south of Europe, however, it rises to a lofty tree, with a clear trunk, fifty feet at the least, supporting a low, spreading, picturesque head, and is one of the most beautiful objects of Italian scenery.

The miniature figure, 3, represents the cone which is five or six inches long; and the fruit, figure 2, three quarters of an inch. The kernels have a pleasant flavour, and are used in the dessert as almonds. They are kept by seedsmen.

Seedlings should be raised singly in pots, that their roots be not injured in transplanting.

Rhododendron hybridum. 3/4

Silene chlorafolia. 3/4

Arbutus procera. 3/4

Ribes Menziesii. 3/4

RHODODEN'DRON HYB'RIDUM.

HERBERT'S HYBRID RHODODENDRON.

Class. DECANDRIA. *Order.* MONOGYNIA.

Natural Order. RHODORACEÆ.

Hybrid Origin.	Height. 4 feet.	Flowers in June.	Habit. Shrub	Raised in in 1818.

No. 941.

The meaning and derivation of the word Rhododendron has been lately noticed.

We have here an intermediate progeny between Rhododendron and Azalea, which was raised at a period when the appellation hybridum was not applicable, as it now is, to a multitude of varieties. We are glad to have met with it, and to publish it as the prognostic, thirty years ago, of that which has been realized, and as evidence that hybrid plants are not of so temporary a character as some botanists have supposed.

This plant was raised at Spofforth, by the present Dean of Manchester, The Hon. and Rev. W. Herbert, whose talents and industry have opened a wide field of enquiry regarding hybrid plants, more especially those of the bulbous kind.

It originated from seed, ripened on the common white glaucous-leaved Azalea, in the flower of which the pollen, or dust from the anthers of Rhododendron maximum had been purposely substituted for that of its own flower. This was effected in the year 1813, and in 1817 Mr. Herbert sent a specimen of the plant thus raised, to the Rev. John

Bellenden Ker, the editor of the Botanical Register, in which work it was published under No. 195; where it is observed that the plant takes after the Rhododendron in its coreaceous evergreen foliage, the number of its stamens, the redness and expansion of the limb of the corolla; after the Azalea in the blueness of the leaves, the tapering of these towards each end, in the cylindrical elongation and whiteness of the tube of the corolla; and interchangeably after both parents, in various points of smaller note. It forms a compact plant, three feet high, flowering profusely, and is easily recognised.

The work of the very Rev. the Dean of Manchester, on the Amaryllidaceæ, should be read by every person who feels the least interest in these pursuits; and we shall conclude by quoting some of his own words therefrom on the subject of hybrids. "To the cultivators of ornamental plants the facility of raising hybrid varieties affords an endless source of interest and amusement. He sees in the several species of each genus that he possesses, the materials with which he must work; and he considers in what manner he can blend them to the best advantage, looking to the several gifts in which each excels, whether of hardiness to endure our seasons, of brilliancy in its colours, of delicacy in its markings, of fragrance, or stature, or profusion of blossom, and he may anticipate with tolerable accuracy the probable aspect of the intermediate plants which he is permitted to create, for that term may be figuratively applied to the introduction into the world of a natural object which has, probably, never before existed in it."

SILE'NE CHLORÆFO'LIA.

CHLORA-LEAVED CATCHFLY.

Class.
DECANDRIA.

Order.
TRIGYNIA.

Natural Order.
SILENACEÆ.

Native of	Height.	Flowers in	Duration.	Introduced
Armenia.	1 foot.	June, Aug.	Perennial.	in 1796.

No. 942.

The term Silene is derived from a similar word in the Greek language, in allusion to that peculiar exudation of the stems of most of the species of this genus, which has been considered as resembling saliva.

This is a plant which is not only rarely met with, but is also exceedingly desirable, from a certain neatness of character which is not easily described; it arises chiefly from smoothness of outline and surface, and is independent of colour. It is widely diffused, having been found in Armenia, in Georgia, and the Eastern Caucasus.

It is a hardy perennial, which to be seen in perfection should be planted out in a rich light soil, in a rather dry situation, where it will expand its blossoms towards evening, and also in cloudy weather; but, too modest to endure a glaring light, the flowers quickly succumb to the bright rays of the sun. As seeds are occasionally ripened, young plants should be raised from them, since it is found that seedling plants both grow and blossom more freely than those raised either from cuttings, or division of the roots.

AR'BUTUS PROCE'RA.

TALL STRAWBERRY TREE.

Class. DECANDRIA. *Order.* MONOGYNIA.

Natural Order. ERICACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
N.America	18 inches.	May.	Shrub.	in 1827.

No. 943.

The origin of the word Arbutus is involved in some uncertainty from which it is not now likely to be extricated. The Celtic ar, signifying rough, and boise, a bush, are usually considered the origin of Arbutus. But, as we have before stated, it is as likely to have been adopted by the Latins from their own word arbos, a tree.

This evergreen glossy-leaved shrub, is a native of the north-west coast of North America, where it was discovered in mountainous woods, by the late indefatigable Douglas, in his capacity of collector for the London Horticultural Society. It was previously unknown to botanists, and although it has been distributed by the society amongst its Fellows, it has not hitherto been very generally cultivated. This may have arisen from its being too tender to bear the vicissitudes of an English winter in all situations, it lived however, unprotected and uninjured, through the destructive winter of 1837—8, both in Devonshire and Middlesex ; therefore a wall, or slight protection will secure its preservation.

It may be increased by cuttings, or by grafting on the common species.

RI'BES MENZIE'SII.

MENZIE'S GOOSEBERRY.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
GROSSULACEÆ.

Native of California	Height. 8 feet.	Flowers in April.	Habit. Shrub.	Introduced in 1837.

No. 944.

Ribes, see No. 797. The specific name is given after Mr. Menzies, a botanist and surgeon, who became known from his services, in company with Vancouver, in a voyage round the world.

Of the species of Ribes now before us, no engraving has, we believe, ever been published. It has a close alliance with speciosa, (Botanist, 38) but its flowers are not showy. It was raised from Californian seeds, sent home by Douglas; and has proved a completely hardy shrub, which may be called sub-evergreen, for it retains a great portion of its foliage throughout the winter.

The number of introduced species of Ribes, has of late years been considerably increased, but none amongst them prove worthy of notice on account of their fruit. Our own truly valuable Ribes grossularia—the Gooseberry, and Ribes rubrum—the Currant, remain, as regards this genus, the monarchs of the garden.

This is a very strong-growing shrub, forming a large compact bush, which blossoms freely, and may be easily increased by layers of the low branches or by its suckers, which are generally abundant.

Vaccinium fuscatum. 5/6

Cerasus padus. 3/4

Rhododendron Caucasicum 3/4

Sedum telephium. 3/4

Miss Maund del. 237 Kates. sculp.

VACCIN'IUM FUSCA'TUM.

RED-TWIGGED WHORTLE-BERRY.

Class. OCTANDRIA. *Order.* MONOGYNIA.

Natural Order. ERICACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
N.America	2 feet.	May & June	Shrub	in 1770.

No. 945.

Vaccinium, perhaps from baccinium, signifying berry-bearing — producing baccæ, or berries.

This, with many other Vacciniums, are highly desirable plants for the shrubbery and flower garden; not alone for their flowers, or character as shrubs, but for their fruit also, many of which produce subacid berries which would be useful in domestic economy. It is questionable, however, whether they really excel our black and red currants; but they would at the least produce variety, which is always agreeable; and as palates vary they would meet with admirers. It would be a praiseworthy effort in any nobleman to increase our knowledge of exotic fruits by devoting a portion of his garden expressly to their culture.

North America is the native nursery of nearly all the Vacciniums, whence more than forty species have been imported to this country, at various times, since the year 1760; and it is believed that many others will still be found in that inexhaustible expanse of vegetable riches.

This species should be planted in sandy peat, and increased by layers. Its fruit is austere.

CE'RASUS PA'DUS.

BIRD CHERRY.

Class.	*Order.*
ICOSANDRIA.	MONOGYNIA.

Natural Order.
ROSACEÆ.

Native of Britain.	Height. 30 feet.	Flowers in April, May.	Habit. Tree.	Inhabits Woods.

No. 946.

Cerasus is the genus which includes our common Cherry, as well as the ornamental tree now figured, and between twenty and thirty other species. This generic name is intimately connected with ancient history. It is related by Pliny, that previous to the war of Lucius Lucullus against the hateful Mithridates, king of Pontus, the Cherry had not been cultivated in Italy. This was above seventy years before the birth of our Saviour. The victory of Lucullus gave to Italy some of the natural as well as artificial riches of Pontus, and amongst them was the Cherry; which was brought from Cerasus, in Pontus, and therefrom received its present generic name. Amongst the artificial riches acquired at that remote period was the celebrated colossal statue, in oriental marble—the Apollo Capitollinus, thirty ells in height, portions of which are still, we believe, to be seen in the Capitol at Rome. These are associations not unimportant to the young historian; and whilst he enjoys his cherries, his thoughts will naturally revert back to the effects amongst an eastern people, of pomp and power unswayed by the laws of morality; and to scenes of barbarity and guilt, in

the absence of christian precepts. Padus, a word of uncertain meaning, is believed to be the ancient Greek name of the Bird Cherry, it is therefore retained as our specific appellation. To man the fruit is nauseous, but to many sorts of birds is particularly acceptable—hence the name Bird Cherry, or Fowl Cherry. In Scotland it is called Hagberry.

The Bird Cherry is wild nearly all over Europe, and in many parts of Asia. It is exceedingly hardy, being known as far north as Lapland and Siberia; and in our own country it is sometimes met with in a wild state, but less frequently, perhaps, than two hundred and fifty years ago, when Gerard said "It groweth in the wild woods of Kent, and is there used for stocks to graft other Cherries upon, of better taste, and more profit, as especially those called the Flanders Cherries: this wild tree grows very plentifully in the North of England, and in Lancashire almost in every hedge."

It is generally met with as a large shrub, or small tree; still, in favourable situations, it attains the size of a moderate timber tree; and its wood, which has a yellowish tint, and close texture, is well suited to the purposes of the cabinet maker. Its fruit, disagreeable as it is to the palate, is said to be used on the continent, in brandy and wines, to give them a pleasant flavour. Its foliage is so attractive to some species of catterpillers that a continental journalist advised that it should be planted in woods as a decoy for them.

It may be readily propagated either by layering, or from seeds.

RHODODEN'DRON CAUCAS'ICUM.

CAUCASIAN RHODODENDRON.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
RHODORACEÆ.

Native of Caucasus.	Height. 18 inches.	Flowers in April.	Habit. Shrub.	Introduced in 1820.

No. 947.

Rhododendron; for the meaning of the name see No. 63. Caucasicum is given as a distinctive appellation, on account of the first plant of the species which was introduced to England having been discovered on Mount Caucasus.

Our beautiful shrub was discovered inhabiting mountains which border on the region of perpetual snow; deserted, it may be said, by almost every vegetable occupant of the lofty waste; even the Juniper, the very child of high places, shrinks from the inclemency of its attenuated atmosphere, and lodges at an altitude below. The Vaccinium myrtillus and Vitis idæa being the only shrubby friends found to accompany, in this inhospitable region, the beautiful Rhododendron Caucasicum.

Several varieties of this plant are now in cultivation, and scarcely do any in the genus excel them in beauty. The original variety introduced was more strongly shaded with a bright rose-colour than the present one; and others, of hybrid origin, possess more or less of the characteristic features of the parent. In our dense atmosphere it requires a sheltered habitation, in a peat bed.

SE'DUM TELE'PHIUM.

COMMON ORPINE STONECROP.

Class. DECANDRIA. *Order.* PENTAGYNIA.

Natural Order. CRASSULACEÆ.

Native of Britain.	Height. 2 feet.	Flowers July to Sep.	Duration. Perennial.	Inhabits field borders.

No. 948.

The meaning of the word Sedum has been explained under No. 460. Telephium, is a name continued to this plant under the belief that it is the Telephium of the ancients; such appellation being also employed to distinguish an ulcer of peculiar character; but whether the plant was a resemblance of, or remedy for, such ulcer is uncertain.

Our engraving shows two specimens of Sedum telephium, which have grown together in the Birmingham Horticultural Society's Garden for the space of three years. Two miniature sketches also are given to explain the habit of each, the one being upright, the other decumbent. If small specimens of these plants be examined apart they are undistinguishable; it is only in juxtaposition, and in growth, when the whole plants are seen, that they display their prominent differences. These distinctions, have continued without variation during the whole time they have grown together.

The upright variety of Sedum telephium has been well known to British botanists time out of mind. Our oldest writers mention it, but it is not certain that the decumbent plant has ever come under

particular observation. Martyn, in his edition of Miller's Dictionary, quotes several plants as synonymes of this species, from old authors; and among them Telephium floribus purpureis of Gerard and Parkinson; a plant which agreeably to their discription, closely resembles our decumbent variety; their description, however, is borrowed from their foreign predecessors, Camerarius and Clusius; and the plant they refer to is mentioned as a native of Germany.

The variety which we here introduce to the notice of British botanists was found, some years ago, as we are informed by Mr. Cameron, at a considerable elevation, on the Titterstone Clee Hill, in Shropshire; where it was even more slender than at present it is in cultivation. It is proposed to call the Titterstone plant Sedum telephium, variety alpinum. On the whole it is more showy than the common one, and differs from it in the following particulars. Its stems are more slender and diffuse, its corymbs of flowers somewhat more branched and spreading, and of a rather deeper colour; it is three weeks earlier in flowering than the erect plant, and also more tender. Exclusive of these differences, which would escape observation when the plants are apart, no decided specific character has hitherto been discovered by which it can be distinguished as a species distinct from Sedum telephium. It is nearly allied to the Sedum telephioides of North America.

It flourishes in the common soil of the garden, and the roots may be divided whenever increase is desired.

Hippocrepis comosa.

Dianthus nitidus.

Orchis latifolia.

Erodium Reichardi.

HIPPOCRE'PIS COMO'SA.

TUFTED HORSESHOE VETCH.

Class.
DIADELPHIA.

Order.
DECANDRIA.

Natural Order.
LEGUMINOSÆ.

Native of	Height.	Flowers in	Duration	Inhabits
Gt.Britain.	9 inches.	May, July.	Perennial.	Chky. pl.

No. 949.

The generic name, Hippocrepis, is deduced from two Greek words, HIPPOS, a horse; and KREPIS, a shoe; alluding to the shape of the recesses of the pods, which are so curved as to give them the shape of a horse's shoe.

This is a pretty prostrate plant for placing at the front of the parterre, where it will be brought near to the eye of the observer. It is also suitable for ornamenting rock-work, and will grow the more freely from having a dry situation.

It is found in most parts of Europe, where chalk prevails, or a dry calcareous soil. In England it is chiefly confined to Kent, Bedfordshire, Berkshire, and others of the chalk-producing counties, although it may be met with on rocks, in some other parts of the kingdom, where lime forms the base of their composition.

This plant requires no care, if a sufficiently dry situation be given it. It may be divided at the root when increase is desired, which should be effected in the spring; and where a collection of these plants is kept in pots, this will form a pretty addition.

DIAN'THUS NIT'IDUS.

SHINING PINK.

Class.
DECANDRIA.

Order.
DIGYNIA.

Natural Order.
SILENACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Carpath.M.	6 inches.	July, Aug.	Perennial.	in 1822.

No. 950.

The meaning of Dianthus has been previously noticed. Nitidus, (shining) from the Latin, points to the fact of the corolla having a glossy appearance, contrary from the Dianthus generally.

This, like the greater portion of the Dianthus tribe, is an alpine plant, being a native of that grand Hungarian boundary, the Carpathian Mountains, and is said to be found at the termination of the Beech-tree forests, which are so extensive in some of the European alpine districts. Plants of the Natural Order, Caryophylleæ, of Jussieu, are found more abundantly in cold than warm districts; according to Humboldt, they constitute but a twenty-seventh of the Flora of Germany, whilst of that of Lapland they amount to a seventeenth of the whole.

Dianthus nitidus is hardy, but it is best cultivated with the alpine plants; like others of its family it loves a dry situation, and to accommodate it in this particular, the pots should be one third filled with drainers, and the soil be sandy peat and loam.

It may be increased by division, or from seeds, but not abundantly.

OR'CHIS LATIFO'LIA.

BROAD-LEAVED ORCHIS.

Class. GYNANDRIA. *Order.* MONANDRIA.

Natural Order. ORCHIDACEÆ.

Native of Britain.	Height. 1 foot.	Flowers June, July.	Duration. Perennial.	Inhabits Moist mds.

No. 951.

This name has been borrowed from the Greek language, and alludes to its divided roots.

It is a rare circumstance to see our native species of Orchis ornamenting the flower garden; an omission which generally prevails on account of some difficulty attaching to the cultivation of a few of the species. This, however, does not exist with all, and particularly with that now figured. Orchis latifolia may not only be kept with little attention, but is increased by seedling plants, which will spring up spontaneously about one that has ripened seeds; of this, the plant from which our drawing was made is an instance. Seedlings usually blossom in the second or third year of their growth.

A method of cultivation was tried with success, a few years ago, by Thomas Appleby, gardener at Horsforth Hall, and communicated to the Gardeners' Magazine, which we confess never to have tried, but believe to be worthy of adoption. We hope, from its extreme simplicity, that some of our friends will not fail to put it into practice, and communicate the result. To an unthrifty bed of American plants a coat of moss was applied. And

this appears not to be alone advantageous to the growth of American shrubs, but to the Orchis and many other plants which usually suffer injury from heat in summer, or cold in winter. This correspondent says, "I provided moss in large quantities from a rocky wood, above Kirkstall Abbey: it comes off the rocks in large flakes, like fleeces of wool, and I have no doubt may be found in all similar places. With this moss I covered the surface of the bed two inches thick, and gave a good watering. My expectations were not disappointed; the plants now stood the hottest sun, without flagging; this work having been done in the height of summer; and the Rhododendrons, Azaleas, Daphnes, Kalmias, &c., put on a most flourishing appearance.

"There is," says Mr Appleby, "a tribe of plants which, from the curious structure of their fructification, is well worthy of a place in the flower garden, I mean the hardy Orchidaceæ." A few species of these were planted under moss, and they flowered much finer than in a wild state, throwing up their flower-stems fifteen to eighteen inches high, and increasing at the roots three for one.

The moss on the surface would equalize both the temperature and moisture, and place many plants, as well as Orchises, in a situation very natural to them. The Orchis latifolia may be kept in pots, with very little attention, so that it be not exposed to the sun, and suffered to become dry; and the roots may be taken up from the meadows at any season, cleaned, and potted in peat, loam, and sand, and kept in a shady situation.

ERO'DIUM REICHAR'DI.

REICHARD'S HERON'S-BILL.

Class. MONODELPHIA. *Order.* HEPTANDRIA.

Natural Order. GERANIACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Minorca.	1½ inches.	April, Sept.	Perennial.	in 1629.

No. 952.

The present generic name is founded on the Greek ERODIOS, a heron. Allusion is hereby made to the carpels or fruit of the plant, from a fancied likeness of them to the head and bill of the heron. It may be convenient to many of our readers, that we remind them of the division which was made of the genus Geranium as it originally existed, which was noticed in an early number of this work.

The species of Geranium, according to the arrangement of Linneus, had increased to an inconvenient number, when L'Heritier, a French botanist, divided them into three genera, giving them the names of Geranium, Pelargonium, and Erodium. This idea was a happy one, inasmuch as Geranium being derived from GREANOS, a crane, he adopted Pelargonium, from PELARGOS, a stork, and Erodium, from ERODIOS, a heron. Hence, a well-defined group of plants, are appropriately designated by three naturally allied birds, whose heads and long bills resemble the long-awned carpels, or fruit of the vegetable.

The marks which distinguish these three genera are simple. The Geraniums have ten perfect or

fertile stamens; the Pelargoniums possess only seven that are fertile; and Erodium but five. Both Pelargonium and Erodium, be it remembered, have the rudiments of others to complete the number ten. Linneus was aware of the circumstance, but seeing the harmony of all other parts of these plants, united them in one genus. Had their fertile stamens only been counted, they would, of course, according to his system, have fallen into distinct classes.

Great Britain has three species of Erodium, of which cicutarium is most common. If the seeds of this be gathered and made moist and dry alternately, they will perform curious gyrations, or twistings, natural to them when fallen on the surface of the earth,—an assistance afforded them by the Preserver of all things, to facilitate their dispersion and vegetation, by twisting into the coats of animals, and burying themselves in the earth.

Erodium Reichardi was discovered in the island of Minorca, by a French botanist, who first introduced it to France; and after whom its specific name, Reichardi, was consequently adopted. It has long had a place amongst alpines, and been held in some esteem, on account of its possessing a character so distinct from all others of the genus. In a light dry soil, and sheltered situation, it will bear a mild winter, but it is far better to keep it in a pot; and if regular frame protection be not at hand, it may have a place in the window of a spare room during frosty weather. It should be potted in a mixture of peat and loam, on a good stratum of drainers.

Cratægus oxyacantha. 1/3

Ribes cerum. 1/1

Gentiana intermedia. 1/2

Epilobium spicatum. 1/1

Mills del. 239 Water sculp.

CRATÆ'GUS OXYACAN'THA.

Var. puniceo flore pleno.

HAWTHORN.

Double scarlet variety.

Class.
ICOSANDRIA.

Order.
DI-PENTAGYNIA.

Natural Order.
ROSACEÆ.

Native of Britain.	Height. 15 feet.	Flowers in May, June.	Habit. Tree.	Inhabits hedges.

No. 953.

The word, Cratægus, of the ancient Greeks, used by Theophrastus, was deduced from KRATUS, strength; and the hardness and strength of its wood fully warrant the appellation. Oxyacantha, signifying a sharp spine, was used for the same plant by Dioscorides, hence both names have been retained. Haw, is a word that has been transmitted to us from the Saxons, as a name for the fruit of the Cratægus; whence, of course, comes Hawthorn, as a name for the plant.

Notwithstanding the introduction, of late years, of numerous species of Hawthorn, possessing much beauty, these shrubs are comparatively neglected. It is well observed in the Arboretum Britannicum, that "Of all the deciduous ligneous plants in cultivation in British gardens, there is not one which, taking it altogether, can be compared with the genus Cratægus. All the species may be trained either as small, handsome, exceedingly picturesque trees; or as beautiful and picturesque shrubs, at the pleasure of the cultivator. They have all a characteristic, neat, orderly manner of growth; neither so slow as to convey the idea of want of

vigour, nor so rapid and robust as to be considered coarse and rambling. Their leaves are remarkably neatly cut and finely tufted; their flowers appear in masses so abundant, in some species, as almost to cover the plant in the flowering season; and their fruit is produced in as great abundance as their flowers. The fruit varies in size, from that of Cratægus spathulata, which is not much larger than a mustard seed, to that of Mexicana, which is about as large as a golden pippin apple." If a man were, says Loudon, to be exiled to an estate without a single tree or shrub on it, with permission to choose only one species of ligneous plants to form all his plantations, shrubberies, orchards, and flower-gardens, where would he find a genus that would afford him so many resources as that of Cratægus? Here is the opinion of a writer of acknowledged judgment; still one who had never seen the beautiful clusters of miniature roses which we now figure as the produce of the Hawthorn. Our readers need not think of bushes being inconvenient in the garden. These plants may be kept to any size or form desired; our own, whose flowers are here depicted, is but twelve inches high. The various species and varieties are propagated by grafting on stocks of the common Hawthorn, and consequently may be chosen of any height, and trained to any form.

The double scarlet is certainly the most beautiful, still there are others that should be known; as tanacitifolia and odoratissima, late flowerers, with large fruit. Also viridis and florida, dwarf species, with large flowers, well suited to small gardens.

RI'BES LAUCUS'TRE.

LAKE-SIDE CURRANT.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
GROSSULACEÆ.

Native of	Height.	Flowers in	Habit.	Introduced
N. America	2 feet.	April, May.	Shrub.	in 1827.

No. 954.

Ribes brings to mind that period of our history when botanists studied plants only for their medicinal qualities. It was the name of an acid herb.

Of the various ornamental species of Ribes little was known in England before 1824, in which year Douglas was sent out by the London Horticultural Society to North America, to collect plants for that establishment. Although the lamented death of this energetic botanical collector occurred when he had been employed in this capacity but about eight years, he introduced to England upwards of two hundred species of ornamental ligneous and herbaceous plants; including amongst them twenty-four Lupines and fourteen Currants, of which the species here figured is one.

The plant of which we now give an engraving is, we believe, the Ribes echinatum of Douglas, but it bears no well-marked specific distinction from lacustre, although its trailing habit gives it a very different appearance in growth. It is a free flowering shrub, intermediate between the Gooseberry and Currant; and may be propagated by layers of the young wood.

GENTIA'NA INTERME'DIA.

INTERMEDIATE GENTIAN.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
GENTIANACEÆ.

Native of N. America	Height. 1 foot.	Flowers in July.	Duration Perennial.	Introduced in 1820.

No. 955.

The origin of the generic name, Gentian, will be remembered by our readers, at least, so it may be hoped, for it doubtless is one amongst the diversified gratifications afforded by the cultivation of a flower garden, that so many of the subjects step up as it were, and relate some historical fact—give rise to some interesting reminiscence, which, but for their presence, may never again have afforded us pleasure.

The general character of the various species of Gentian is much alike, all being small, but very attractive; and blue being the prevailing colour of their flowers. They deserve especial notice, requiring very little care in cultivation, when well established in a suitable soil and situation.

Gentiana intermedia should be grown in good peat soil, and remain undisturbed, and it will produce a fine show of flowers. When seeds are ripened, they should be immediately sown in pots of sandy peat, and placed in a cold frame. When the young plants come into the rough leaf they should be potted separately, and in the following spring be turned into the borders in peat.

EPILO'BIUM SPICA'TUM.

SPIKED WILLOW HERB.

Class.
OCTANDRIA.

Order.
MONOGYNIA.

Natural Order.
ONAGRACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
N. America	4 feet.	July & Aug.	Perennial.	before 1820

No. 956.

Modern authors content themselves by deriving the word, Epilobium, from the Greek EPI, upon; and LOBOS, a pod; indicating that the flower grows on a pod. The name was, however, adopted by Conrad Gesner, and he gave a third Greek word, ION, a violet, as a part of the compound, thereby conveying the idea of a violet, or beautiful flower, on a pod.

Epilobium spicatum holds a place in North America similar to that occupied in Europe by Epilobium angustifolium. It is, however, much smaller in all its parts, and thereby rendered a suitable plant for introduction into the flower borders, mingled with the taller species of Veronica, Phlox, Spiræa, and others of similar character. It has never, we believe, been figured in any British work, and if it has not been lost to our gardens, it has been little known, till re-introduced a few years ago.

This plant, like its European ally, increases by its stoloniferous roots, and by these may be increased with facility. It flourishes in any common earth, and does not object to a moist situation.

Berberis Chinensis. 3/4

Adenophora coronopifolia. 2/3

Gymnadenia conopsea. 1/2

Pyrola uniflora. 3/4

Mitte del. 240 Wetto sculp.

BER'BERIS CHINEN'SIS.

CHINESE BARBERRY.

Class. HEXANDRIA. *Order.* MONOGYNIA.

Natural Order. BERBERACEÆ.

Native of China.	Height. 5 feet.	Flowers in May, June.	Habit. Shrub.	Introduced in 1815.

No. 957.

Berberis, or wildberry, according to the language of Arabia, is a name of antiquity, the use of which was continued by the herbalists, and subsequently adopted by modern writers. Gerard says "It is called in shops Barbaries, of the corrupted name Amyrberis." What species of plant originally bore this appellation is now mere matter of conjecture.

The present very showy shrub is amongst the most valuable of the whole genus; it is more dwarf than vulgaris, and a more abundant flowerer than any Barberry hitherto introduced; indeed it would be difficult to conceive how a shrub could be more copiously decked with floral beauty — its every branch drooping as it were with a solid mass of golden blossoms. It is, too, as hardy as the common Barberry of our shrubberies; and may be propagated from layering, and from seeds. It has much of the character and quality of the common Barberry—a plant in greater estimation in former years it would seem than at present. However useful as well as beautiful its fruit and flowers are still acknowleged to be, our forefathers contented themselves not with these alone, for the foliage of

the Barberry bush supplied them with a sauce, and its bark with physic. Lyte, in his "NEVVE HERBALL, OR HISTORIE OF PLANTES," published in 1578, says "With the greene leaues of the Barberie bush they make sawce to eate with meates as they do with Sorrel, the which doth refresh and prouoke appetite, and is good for hoate people and them that are vexed with burning agues." Gerard refers to Galen, the celebrated physician (who flourished in the second century of the christian era), and says "He reckoneth up the tender sprigs of Barberry among the tender shoots that are to be eaten." They are mentioned in more recent times as having been used as an ingredient in salads, but they must have escaped the observation of the great master of "Sallets," John Evlyn, for in his celebrated Acetaria no mention is made of their use.

History furnishes us with an account of the still more ancient use of the Barberry, it carries us back even to the ancient Egyptians, who used the fruit as a remedy in fevers of the most pestilential character. It was macerated in water, and the strained liquor sweetened and taken freely as a drink.

Old authors mention the use of the bark of the common Barberry as a remedy for Jaundice, but without laying much stress on its virtues. Our countryman, John Ray, however, used a decoction of it with decided success. We are the more desirous of making this known, from the earnest recommendation of the remedy by friends on whom we can depend. The inner bark, boiled in milk, or old ale, we are assured, has cured patients of Jaundice who had been given up by professional skill.

ADENOPH'ORA CORONOPIFO'LIA.

BUCKS-HORN-LEAVED ADENOPHORA.

Class.
PENTANDRIA.

Order.
MONOGYNIA.

Natural Order.
RUBIACEÆ.

Native of	Height.	Flowers in	Duration	Introduced
Dahuria.	2½ feet.	June, July.	Perennial.	in 1822.

No. 958.

The name of this genus, Adenophora, is derived from the Greek ADEN, a gland; and PHOREO, to bear; the word thus compounded, alludes to the cylindrical nectary around the base of the style.

The great number of Campanulas—upwards of a hundred and fifty species, rendered it desirable to divide them into several genera, if any well-marked distinctions could be observed amongst them. In general they are so strictly analogous that no division could be prudently effected, excepting of a few species. Adenophora contains some of these, and its name very appropriately points to a principal mark of difference.

Adenophora coronopifolia is an exceedingly handsome herbaceous plant for the borders, when well grown. It should be planted in a light rich soil, and dry situation, and left in one place to become well established. Like many of the Campanulas it throws up very few offsets, therefore recourse is sometimes had to slitting the crown of the roots for increase. Weak plants, from such operation, should be potted, have a slight protection during the following winter, and be turned out in spring.

GYMNADE'NIA CONOP'SEA.

GNAT-LIKE FLOWERED GYMNADENIA.

Class. GYNANDRIA. *Order.* MONANDRIA.

Natural Order. ORCHIDACEÆ.

Native of Britain.	Height. 1 foot.	Flowers in June, July.	Duration Perennial.	Inhabits Meadows.

No. 959.

Gymnadenia is deduced from the Greek GYMNOS, ADEN, signifying a naked gland. It has reference to the pollen masses.

We are glad to present our readers with specimens of some of the hardy Orchidaceæ, on account of the affinity that exists between these and the splendid kindred productions of tropical regions, which are now so generally sought for by those who possess the means of cultivating them; and which almost every one can have the pleasure of seeing at some or other of the numerous horticultural exhibitions that now take place in all parts of the country. The existence of societies for the encouragement of the cultivation of fruits, flowers, and edible vegetables, is a characteristic of the present age. The advantages they produce are incalculable, since it is impossible to estimate the benefits which gradually arise out of the cultivation of the public mind; and the study of nature stands foremost amongst all studies that are to afford knowledge. Having possessed ourselves of certain portions of that knowledge which exist in nature, we may make deductions therefrom by comparing and

weighing the value of one and another, but the foundation of all our reasonings, if true, will still be found in nature. Robert Mudie has justly said "As for the productions of art, though many of them are curious, and far from unworthy of our attention in order that we may 'learn to excel,' they are at best, but second-hand applications of those properties and principles which we find original and fresh when we turn to nature itself. The very depth of human knowledge, and the very height and perfection of human art, are, in truth, nothing more than the revealing and applying a few of the laws and principles of nature; and though we often flatter ourselves that there is something profound in what we know, and mighty in what we do, it is still all in nature."

The Gymnadenia conopsia is a hardy British orchidaceous plant—handsome, and very fragrant. If cultivated in pots it should be potted in light sandy loam, with plenty of potsherds at the bottom of the pots; and every spring it should be repotted in fresh soil; that in which it has continued during the winter becoming sour and unfit for summer growth. If planted in the open ground, it should be planted in light loam and a shady situation. It may be collected from its native habitat, at any season, and being cleared from the earth that may attach to it, may be planted in pots or the open soil without fear of failure. We would, notwithstanding, remind our readers of the instructions given under Orchis latifolia, No 951. Humidity in summer—the season of growth, is important to the luxuriance of this plant.

PYRO'LA UNIFLO'RA.

SINGLE-FLOWERED WINTERGREEN.

Class.
DECANDRIA.

Order.
MONOGYNIA.

Natural Order.
ERICACEÆ.

Native of Britain.	Height. 3 inches.	Flowers in May, June.	Duration Perennial.	Inhabits Woods.

No. 960.

Pyrola is a word considered as the diminutive of pyrus, and adopted from the resemblance of their foliage. Salisbury formed a new genus for this plant, and called it Moneses, from MONOS, alone; in allusion to its solitary flowers. The separation has not been generally followed.

Under No. 575 we described the Pyrola minor, a pretty alpine plant, one that is rather scarce; our present subject, however, is one of exceeding rarity; and for the opportunity of drawing it we are indebted to Mr. Cameron, Curator of the Birmingham Horticultural Society's garden. In allusion to it he says, "It is the first plant of it I ever saw under cultivation, and it has flowered finely. It was planted in live sphagnum, and a little sandy peat, placed under a hand-glass, in a shaded situation, and kept very moist. Under this treatment it has grown luxuriantly, and continues to do so. It is likely to be a plant peculiarly adapted for growing in Ward's cases; but others planted with it should be those requiring the same degree of moisture, such as the Droseras, Parnassia, Pinguiculas, Trichomanes, Hymenophyllums, &c."

Maund, Benjamin,

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